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F-106 SCHEDULED MAINTENANCE STUDY. USER'S MANUAL, (U)  
SEP 72 G WANG, R S GROTE, J R COOPER

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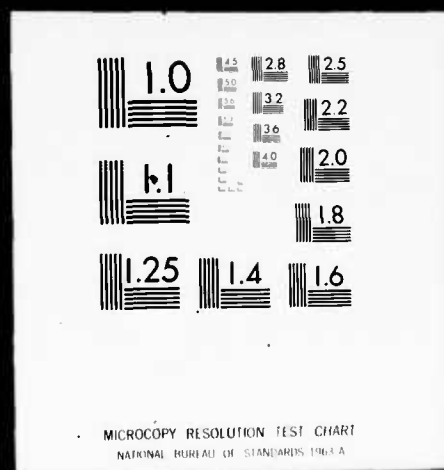
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Gordon/Hang,  
L. L. Grote  
L. L. Cooper

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## FOREWORD

This User's Manual was prepared by the San Diego Operation of Convair Aerospace Division of General Dynamics for the San Antonio Air Materiel Area, Kelly AFB, Texas, under Request VE12, change 1, to Engineering Services Contract F41608-71-D-1383 dated 18 February 1972. Request VE12 is administered under the direction of Capt. G. A. Morgan (SAMMER). This document fulfills the requirements of CDRL Item B010.

Prepared by:

Gordon Wang

G. Wang  
Design Specialist/  
Design Programming

R. S. Grote

R. S. Grote  
Design Specialist/  
Operations Research

J. R. Cooper

J. R. Cooper  
Principal Engineer

Approved by:

W. D. Snell

W. D. Snell  
Project Engineer

C. S. Brandt

C. S. Brandt  
Program Manager

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## LIST OF ABBREVIATIONS

ACI	Analytical Condition Inspection
AI	Accident/Incident
AIE	Accidents, Incidents, and EUMR
ANS	American National Standard
ATC	Action-Taken Codes
bpi	Bits Per Inch
byte	8 Binary Bits
CPU	Central Processor Unit
EUMR	Emergency Unsatisfactory Material Report
FH	Flight Hour
HMC	How-Malfunction Code
HPF	Hourly Postflight
IBM	International Business Machine
ID	Identification
IRAN	Inspect and Repair As Necessary
JCL	Job Control Language
MA, ma	Maintenance Action
MISR	COBOL name for correlation and regression subroutine
NAM	Network Analysis Model
NOR	Not Operationally Ready
NORM	Not Operationally Ready due to Maintenance
NORS	Not Operationally Ready due to Supply
NSG	Non-support General
SAAMA	San Antonio Air Materiel Area
SG	Support General
uma	Unscheduled Maintenance Action
WDC	When-Discovered Code
WUC	Work Unit Code

## SECTION 1

### INTRODUCTION

#### 1.1 PURPOSE

→ A system of IBM 370 programs has been developed for the scheduled maintenance study by Convair Aerospace Division of General Dynamics for the San Antonio Air Materiel Area, Kelly AFB, Texas. This handbook provides information needed by user personnel for basic understanding and for executing each of the computer programs. A fleet of 150 F-106 aircraft was used to validate the design of the programs on the IBM 370 (Model 165) at Convair Aerospace, San Diego. The design of the programs is generalized to cover all USAF aircraft. ↑

#### 1.2 SCOPE

For each of the computer programs, the following information is given.

- a. Purpose of the program.
- b. Input Description.
- c. Sample Input.
- d. Procedures.
- e. Output Description.
- f. Sample Output.
- g. Output Size and IBM 370 Time.
- h. Notes on Limitations.

Programs have been written in American National Standard COBOL and Basic FORTRAN IV languages. Section 6 contains the computer source deck listings of all the IBM 370 computer programs together with the job control cards and sample data cards. To achieve compatibility with SAAMA equipment, only the subset of ANS COBOL compatible with Version D COBOL was used. Procedures to convert the IBM 370 programs into the SAAMA IBM 360 are contained in Paragraph 1.4.

To estimate computer time requirement on the IBM 360 from the IBM 370 data, it would be realistic to assume a factor of three to one. Nine-track, 1600-bits-per-inch tapes were used on the IBM 370. The program and data bank tapes, part of the contract end items to be delivered to SAAMA, are seven-track with 800 bits per inch.

In addition to the functions performed by the programs described in this manual, a sort and merge capability is also required. Since sort/merge programs are typically software features supplied with operating systems, the relevant discussions in this handbook are limited to descriptions of the sort/merge control fields.

For a detailed discussion of the engineering model for the scheduled maintenance study, see the Phase I report, Convair Aerospace report GDCA-AHD72-001, and the Phase II report, GDCA-AHD72-003.

### 1.3 MANUAL ORGANIZATION

Four major categories of computer programs are covered in this manual:

- a. Data Reduction Programs (Section 2).
- b. Data Bank Generation (Section 3).
- c. Statistical Analysis Programs (Section 4).
- d. Effectiveness and Cost Programs (Section 5).

Listings of all the IBM 370 computer programs with job control and sample data cards are contained in Section 6. Appropriate figures and tables are included in the various sections to improve the understanding of the logic and structure of the computer programs.

### 1.4 CONVERSION TO IBM 360

As part of the contract end items, computer programs and the data bank are stored in magnetic tapes. FORTRAN and COBOL programs are stored in separate reels.

Data Bank was written on two reels on SAAMA Reel Numbers 1045 (Reel 1) and 9490 (Reel 2). Tape was written on seven-track, 800 bpi with 50 characters per record, blocked 60 to a tape record. FORTRAN and COBOL source programs were written on SAAMA Reel No. 8761 and 10,479, respectively. Tape structure for the program tapes consists of 80 characters per record, blocked 20 to a tape record. There are about 4000 cards for the FORTRAN programs and about 14,000 cards for the COBOL programs.

For the convenience of the users, some modifications were made on the IBM 370 COBOL programs before they were copied onto the previously mentioned tapes:

- a. Removal of the 'sync' in the Data Division.
- b. Replace GOBACK with STOP RUN.
- c. Carriage control character changed to 0, 1, or blank.
- d. Program ID Statement change.



For conversion to IBM 360 at SAAMA, the user must:

- a. Produce IBM 360 job control cards.
- b. Modify file-control in the Input-Output section.
- c. Generate input data cards.

The programs require less than 100,000 bytes of core storage.

## SECTION 2

### DATA REDUCTION PROGRAMS

#### 2.1 GENERAL DESCRIPTION

The purpose of the data reduction programs is to reduce four data source inputs into four sorted files, which are used as input to the data bank generation programs. (See Section 3.) The four data sources consist of:

AFM 66-1 maintenance data.

AFM 65-110 utilization, NOR, and possessed hour data.

Data files for IRAN histories.

Accident, incident, and emergency unsatisfactory material report histories (AIE).

These data files are referred to as 66-1, 65-110, IRAN, and AIE files, respectively.

The analysis of maintenance policies requires that data from the four sources be processed and combined into a single data bank, which serves as input to the various analytical programs. The development of the data bank requires screening, reorganization, and summarization of the data from each of the four sources. The data bank is organized into a sorted file of aircraft serial number histories. For each serial number, all activity records for each of the data sources are summarized to statistics representing seven consecutive days. These seven-day periods are referred to as "weeks," although they do not correspond to any particular calendar week. To obtain the desired data organization in the data bank, the input from each of the four data sources must be sorted into ascending serial number sequence and into chronological order within each serial number. Table 2-1 contains first and last day numbers, with the corresponding calendar dates, for each of the week numbers used for this study. January 1, 1965 is the first day number for the week number one.

In addition to the required data, the 66-1 and 65-110 files contain data that is not relevant to this study. Consequently, these data files must be screened to eliminate the extraneous records. Furthermore, for various reasons, certain aircraft serial numbers are excluded from the data base. The screening programs for the 66-1, 65-110, and AIE files eliminate these serial numbers. Finally, the 66-1 file may contain duplicate records, and after the 66-1 data has been screened, sorted, and merged into a single ordered file, adjacent records must be compared to eliminate the duplicates. The source data tapes for 66-1 and 65-110 are shown in Tables 2-2 and 2-3, respectively.

Table 2-1. Conversion Table for Week Number

WEEK NO.	FIRST-DAY	DATE	LAST-DAY	DATE	WEEK NO.	FIRST-DAY	DATE	LAST-DAY	DATE
1	1	JAN 05	3	JAN 05	10	10	APR 07	16	APR 07
2	11	JAN 05	17	JAN 05	11	17	APR 07	23	APR 07
3	18	JAN 05	24	JAN 05	12	24	APR 07	30	APR 07
4	25	JAN 05	31	JAN 05	13	1	MAY 07	7	MAY 07
5	1	FEB 05	7	FEB 05	14	8	MAY 07	14	MAY 07
6	8	FEB 05	14	FEB 05	15	15	MAY 07	21	MAY 07
7	15	FEB 05	22	FEB 05	16	22	MAY 07	28	MAY 07
8	22	FEB 05	29	FEB 05	17	29	MAY 07	4	JUN 07
9	1	MAR 05	6	MAR 05	18	5	JUN 07	11	JUN 07
10	8	MAR 05	14	MAR 05	19	12	JUN 07	18	JUN 07
11	15	MAR 05	22	MAR 05	20	19	JUN 07	25	JUN 07
12	22	MAR 05	29	MAR 05	21	26	JUN 07	2	JULY 07
13	29	MAR 05	5	APR 05	22	3	JULY 07	9	JULY 07
14	5	APR 05	12	APR 05	23	10	JULY 07	16	JULY 07
15	12	APR 05	19	APR 05	24	17	JULY 07	23	JULY 07
16	19	APR 05	26	APR 05	25	24	JULY 07	30	JULY 07
17	26	APR 05	3	MAY 05	26	31	JULY 07	6	AUG 07
18	3	MAY 05	10	MAY 05	27	7	AUG 07	13	AUG 07
19	10	MAY 05	17	MAY 05	28	14	AUG 07	20	AUG 07
20	17	MAY 05	24	MAY 05	29	21	AUG 07	27	AUG 07
21	24	MAY 05	31	MAY 05	30	28	AUG 07	3	SEP 07
22	31	MAY 05	7	JUN 05	31	4	SEP 07	10	SEP 07
23	7	JUN 05	14	JUN 05	1	11	SEP 07	17	SEP 07
24	14	JUN 05	21	JUN 05	2	18	SEP 07	24	SEP 07
25	21	JUN 05	28	JUN 05	3	25	SEP 07	1	OCT 07
26	28	JUN 05	5	JULY 05	4	2	OCT 07	8	OCT 07
27	5	JULY 05	12	JULY 05	5	9	OCT 07	15	OCT 07
28	12	JULY 05	19	JULY 05	6	16	OCT 07	22	OCT 07
29	19	JULY 05	26	JULY 05	7	23	OCT 07	29	OCT 07
30	26	JULY 05	3	AUG 05	8	30	OCT 07	5	NOV 07
31	3	AUG 05	10	AUG 05	9	6	NOV 07	12	NOV 07
32	10	AUG 05	17	AUG 05	10	13	NOV 07	19	NOV 07
33	17	AUG 05	24	AUG 05	11	20	NOV 07	26	NOV 07
34	24	AUG 05	31	AUG 05	12	27	NOV 07	3	DEC 07
35	31	AUG 05	7	SEP 05	13	4	DEC 07	10	DEC 07
36	7	SEP 05	14	SEP 05	14	11	DEC 07	17	DEC 07
37	14	SEP 05	21	SEP 05	15	18	DEC 07	24	DEC 07
38	21	SEP 05	28	SEP 05	16	25	DEC 07	31	DEC 07
39	28	SEP 05	5	OCT 05	17	1	JAN 08	7	JAN 08
40	5	OCT 05	12	OCT 05	18	8	JAN 08	14	JAN 08
41	12	OCT 05	19	OCT 05	19	15	JAN 08	21	JAN 08
42	19	OCT 05	26	OCT 05	20	22	JAN 08	28	JAN 08
43	26	OCT 05	31	OCT 05	21	29	JAN 08	4	FEB 08
44	31	OCT 05	7	NOV 05	22	5	FEB 08	11	FEB 08
45	7	NOV 05	14	NOV 05	23	12	FEB 08	18	FEB 08
46	14	NOV 05	21	NOV 05	24	19	FEB 08	25	FEB 08
47	21	NOV 05	28	NOV 05	25	26	FEB 08	3	MAR 08
48	28	NOV 05	5	DEC 05	26	5	MAR 08	10	MAR 08
49	5	DEC 05	12	DEC 05	27	12	MAR 08	17	MAR 08
50	12	DEC 05	19	DEC 05	28	19	MAR 08	24	MAR 08
51	19	DEC 05	26	DEC 05	29	26	MAR 08	31	MAR 08
52	26	DEC 05	31	DEC 05	30	1	APR 08	7	APR 08
53	31	DEC 05	7	JAN 06	31	8	APR 08	14	APR 08
54	7	JAN 06	14	JAN 06	1	15	APR 08	21	APR 08
55	14	JAN 06	21	JAN 06	2	22	APR 08	28	APR 08
56	21	JAN 06	28	JAN 06	3	29	APR 08	5	MAY 08
57	28	JAN 06	4	FEB 06	4	6	MAY 08	12	MAY 08
58	4	FEB 06	11	FEB 06	5	13	MAY 08	19	MAY 08
59	11	FEB 06	18	FEB 06	6	20	MAY 08	26	MAY 08
60	18	FEB 06	25	FEB 06	7	27	MAY 08	3	JUN 08
61	25	FEB 06	3	MAR 06	8	3	JUN 08	10	JUN 08
62	3	MAR 06	10	MAR 06	9	10	JUN 08	17	JUN 08
63	10	MAR 06	17	MAR 06	10	17	JUN 08	24	JUN 08
64	17	MAR 06	24	MAR 06	11	24	JUN 08	31	JUN 08
65	24	MAR 06	31	MAR 06	12	1	JULY 08	7	JULY 08
66	31	MAR 06	7	APR 06	13	8	JULY 08	14	JULY 08
67	7	APR 06	14	APR 06	14	15	JULY 08	21	JULY 08
68	14	APR 06	21	APR 06	15	22	JULY 08	28	JULY 08
69	21	APR 06	28	APR 06	16	29	JULY 08	4	AUG 08
70	28	APR 06	5	MAY 06	17	5	AUG 08	11	AUG 08
71	5	MAY 06	12	MAY 06	18	12	AUG 08	18	AUG 08
72	12	MAY 06	19	MAY 06	19	19	AUG 08	25	AUG 08
73	19	MAY 06	26	MAY 06	20	26	AUG 08	1	SEP 08
74	26	MAY 06	31	MAY 06	21	3	SEP 08	8	SEP 08
75	31	MAY 06	7	JUN 06	22	10	SEP 08	15	SEP 08
76	7	JUN 06	14	JUN 06	23	17	SEP 08	22	SEP 08
77	14	JUN 06	21	JUN 06	24	24	SEP 08	29	SEP 08
78	21	JUN 06	28	JUN 06	25	1	OCT 08	6	OCT 08
79	28	JUN 06	5	JULY 06	26	8	OCT 08	13	OCT 08
80	5	JULY 06	12	JULY 06	27	15	OCT 08	20	OCT 08
81	12	JULY 06	19	JULY 06	28	22	OCT 08	27	OCT 08
82	19	JULY 06	26	JULY 06	29	29	OCT 08	3	NOV 08
83	26	JULY 06	31	JULY 06	30	5	NOV 08	10	NOV 08
84	31	JULY 06	7	AUG 06	31	12	NOV 08	17	NOV 08
85	7	AUG 06	14	AUG 06	1	19	NOV 08	24	NOV 08
86	14	AUG 06	21	AUG 06	2	26	NOV 08	1	DEC 08
87	21	AUG 06	28	AUG 06	3	3	DEC 08	8	DEC 08
88	28	AUG 06	4	SEP 06	4	10	DEC 08	15	DEC 08
89	4	SEP 06	11	SEP 06	5	17	DEC 08	22	DEC 08
90	11	SEP 06	18	SEP 06	6	24	DEC 08	29	DEC 08
91	18	SEP 06	25	SEP 06	7	31	DEC 08	5	JAN 09
92	25	SEP 06	31	SEP 06	8	7	JAN 09	12	JAN 09
93	31	SEP 06	8	OCT 06	9	14	JAN 09	19	JAN 09
94	8	OCT 06	15	OCT 06	10	21	JAN 09	26	JAN 09
95	15	OCT 06	22	OCT 06	11	28	JAN 09	2	FEB 09
96	22	OCT 06	29	OCT 06	12	5	FEB 09	9	FEB 09
97	29	OCT 06	5	NOV 06	13	12	FEB 09	16	FEB 09
98	5	NOV 06	12	NOV 06	14	19	FEB 09	23	FEB 09
99	12	NOV 06	19	NOV 06	15	26	FEB 09	30	FEB 09
100	19	NOV 06	26	NOV 06	16	5	MAR 09	7	MAR 09
101	26	NOV 06	3	DEC 06	17	12	MAR 09	14	MAR 09
102	3	DEC 06	10	DEC 06	18	19	MAR 09	21	MAR 09
103	10	DEC 06	17	DEC 06	19	26	MAR 09	28	MAR 09
104	17	DEC 06	24	DEC 06	20	3	APR 09	5	APR 09
105	24	DEC 06	31	DEC 06	21	10	APR 09	12	APR 09
106	31	DEC 06	7	JAN 07	22	17	APR 09	19	APR 09
107	7	JAN 07	14	JAN 07	23	24	APR 09	26	APR 09
108	14	JAN 07	21	JAN 07	24	31	APR 09	3	MAY 09
109	21	JAN 07	28	JAN 07	25	8	MAY 09	10	MAY 09
110	28	JAN 07	4	FEB 07	26	15	MAY 09	17	MAY 09
111	4	FEB 07	11	FEB 07	27	22	MAY 09	24	MAY 09
112	11	FEB 07	18	FEB 07	28	29	MAY 09	31	MAY 09
113	18	FEB 07	25	FEB 07	29	5	JUN 09	7	JUN 09
114	25	FEB 07	3	MAR 07	30	12	JUN 09	14	JUN 09
115	3	MAR 07	10	MAR 07	31	19	JUN 09	21	JUN 09
116	10	MAR 07	17	MAR 07	1	26	JUN 09	28	JUN 09
117	17	MAR 07	24	MAR 07	2	3	JULY 09	5	JULY 09
118	24	MAR 07	31	MAR 07	3	10	JULY 09	12	JULY 09
119	31	MAR 07	7	APR 07	4	17	JULY 09	19	JULY 09

Table 2-1. Conversion Table for Week Number, Continued

WEEK NO.	FIRST-NOV	DATE	LAST-NOV	DATE	WEEK NO.	FIRST-NOV	DATE	LAST-NOV	DATE
239	1863	21 JUL 69	1865	27 JUL 69	303	2111	12 OCT 70	2117	16 OCT 70
240	1870	28 JUL 69	1876	3 AUG 69	304	2116	19 OCT 70	2124	25 OCT 70
241	1877	4 AUG 69	1883	10 AUG 69	305	2123	26 OCT 70	2131	1 NOV 70
242	1884	11 AUG 69	1890	17 AUG 69	306	2132	2 NOV 70	2136	8 NOV 70
243	1891	18 AUG 69	1897	24 AUG 69	307	2139	9 NOV 70	2145	15 NOV 70
244	1898	25 AUG 69	1904	31 AUG 69	308	2146	16 NOV 70	2152	22 NOV 70
245	1905	1 SEP 69	1911	7 SEP 69	309	2153	23 NOV 70	2159	29 NOV 70
246	1912	8 SEP 69	1918	14 SEP 69	310	2160	30 NOV 70	2166	6 DEC 70
247	1919	15 SEP 69	1925	21 SEP 69	311	2167	7 DEC 70	2173	13 DEC 70
248	1926	22 SEP 69	1932	28 SEP 69	312	2174	14 DEC 70	2180	20 DEC 70
249	1933	29 SEP 69	1939	5 OCT 69	313	2181	21 DEC 70	2187	27 DEC 70
250	1940	6 OCT 69	1946	12 OCT 69	314	2188	28 DEC 70	2194	3 JAN 71
251	1947	13 OCT 69	1953	19 OCT 69	315	2195	4 JAN 71	2201	10 JAN 71
252	1954	20 OCT 69	1960	26 OCT 69	316	2202	11 JAN 71	2208	17 JAN 71
253	1961	27 OCT 69	1967	2 NOV 69	317	2209	18 JAN 71	2215	24 JAN 71
254	1968	3 NOV 69	1974	9 NOV 69	318	2216	25 JAN 71	2222	31 JAN 71
255	1975	10 NOV 69	1981	16 NOV 69	319	2223	1 FEB 71	2229	7 FEB 71
256	1982	17 NOV 69	1988	23 NOV 69	320	2230	6 FEB 71	2236	14 FEB 71
257	1989	24 NOV 69	1995	30 NOV 69	321	2237	13 FEB 71	2243	21 FEB 71
258	1996	1 DEC 69	2002	7 DEC 69	322	2244	20 FEB 71	2250	28 FEB 71
259	2003	8 DEC 69	2009	14 DEC 69	323	2251	27 FEB 71	2257	6 MAR 71
260	2010	15 DEC 69	2016	21 DEC 69	324	2258	6 MAR 71	2264	14 MAR 71
261	2017	22 DEC 69	2023	28 DEC 69	325	2265	13 MAR 71	2271	21 MAR 71
262	2024	29 DEC 69	2030	4 JAN 70	326	2272	20 MAR 71	2278	28 MAR 71
263	2031	5 JAN 70	2037	11 JAN 70	327	2279	27 MAR 71	2285	4 APR 71
264	2038	12 JAN 70	2044	18 JAN 70	328	2286	4 APR 71	2292	11 APR 71
265	2045	19 JAN 70	2051	25 JAN 70	329	2293	12 APR 71	2299	18 APR 71
266	2052	26 JAN 70	2058	1 FEB 70	330	2300	19 APR 71	2306	25 APR 71
267	2059	2 FEB 70	2065	8 FEB 70	331	2307	26 APR 71	2313	2 MAY 71
268	2066	9 FEB 70	2072	15 FEB 70	332	2314	3 MAY 71	2320	9 MAY 71
269	2073	16 FEB 70	2079	22 FEB 70	333	2321	10 MAY 71	2327	16 MAY 71
270	2080	23 FEB 70	2086	1 MAR 70	334	2328	17 MAY 71	2334	23 MAY 71
271	2087	24 FEB 70	2093	8 MAR 70	335	2335	24 MAY 71	2341	30 MAY 71
272	2094	25 FEB 70	2100	15 MAR 70	336	2342	31 MAY 71	2348	6 JUN 71
273	2101	26 FEB 70	2107	22 MAR 70	337	2349	7 JUN 71	2355	13 JUN 71
274	2108	27 FEB 70	2114	29 MAR 70	338	2356	14 JUN 71	2362	20 JUN 71
275	2115	28 FEB 70	2121	5 APR 70	339	2363	21 JUN 71	2369	27 JUN 71
276	2122	5 APR 70	2128	12 APR 70	340	2370	28 JUN 71	2376	4 JUL 71
277	2129	13 APR 70	2135	19 APR 70	341	2377	5 JUL 71	2383	11 JUL 71
278	2136	20 APR 70	2142	26 APR 70	342	2384	12 JUL 71	2390	18 JUL 71
279	2143	27 APR 70	2149	3 MAY 70	343	2391	19 JUL 71	2397	25 JUL 71
280	2150	4 MAY 70	2156	10 MAY 70	344	2398	26 JUL 71	2404	1 AUG 71
281	2157	11 MAY 70	2163	17 MAY 70	345	2405	2 AUG 71	2411	8 AUG 71
282	2164	18 MAY 70	2170	24 MAY 70	346	2412	9 AUG 71	2418	15 AUG 71
283	2171	25 MAY 70	2177	31 MAY 70	347	2419	16 AUG 71	2425	22 AUG 71
284	2178	1 JUN 70	2184	7 JUN 70	348	2426	23 AUG 71	2432	29 AUG 71
285	2185	8 JUN 70	2191	14 JUN 70	349	2433	30 AUG 71	2439	5 SEP 71
286	2192	15 JUN 70	2198	21 JUN 70	350	2440	6 SEP 71	2446	12 SEP 71
287	2199	22 JUN 70	2205	28 JUN 70	351	2447	13 SEP 71	2453	19 SEP 71
288	2206	29 JUN 70	2212	5 JUL 70	352	2454	20 SEP 71	2460	26 SEP 71
289	2213	6 JUL 70	2219	12 JUL 70	353	2461	27 SEP 71	2467	3 OCT 71
290	2220	13 JUL 70	2226	19 JUL 70	354	2468	4 OCT 71	2474	10 OCT 71
291	2227	20 JUL 70	2233	26 JUL 70	355	2475	11 OCT 71	2481	17 OCT 71
292	2234	27 JUL 70	2240	2 AUG 70	356	2482	18 OCT 71	2488	24 OCT 71
293	2241	3 AUG 70	2247	9 AUG 70	357	2489	25 OCT 71	2495	31 OCT 71
294	2248	10 AUG 70	2254	16 AUG 70	358	2496	1 NOV 71	2502	7 NOV 71
295	2255	17 AUG 70	2261	23 AUG 70	359	2503	8 NOV 71	2509	14 NOV 71
296	2262	24 AUG 70	2268	30 AUG 70	360	2510	15 NOV 71	2516	21 NOV 71
297	2269	31 AUG 70	2275	6 SEP 70	361	2517	22 NOV 71	2523	28 NOV 71
298	2276	7 SEP 70	2282	13 SEP 70	362	2524	29 NOV 71	2530	5 DEC 71
299	2283	14 SEP 70	2289	20 SEP 70	363	2531	6 DEC 71	2537	12 DEC 71
300	2290	21 SEP 70	2296	27 SEP 70	364	2538	13 DEC 71	2544	19 DEC 71
301	2297	28 SEP 70	2303	4 OCT 70	365	2545	20 DEC 71	2551	26 DEC 71
302	2304	5 OCT 70	2310	11 OCT 70					

Table 2-2. AFM 66-1 Source Data Tapes

<u>Tapes With AFLC Numbers</u>		
71	8417	14196
520	8977	14374
706	9164	15985
781	9244	16750
867	9610	16916
962	10681	18685
1210	11767	19257
1641	11961	19643
1841	12370	20449
5345	13255	20720
6265	13423	20782
7036	13836	20790
7728	14124	70333
8077	14175	
<u>Tapes With KAFB Numbers</u>		
7499	18988	

Table 2-3. AFM 65-110 Source Data Tapes (AFLC Numbers)

90149	93094	93568
90154	93191	93614
90167	93371	93619
90275	93418	93784
90288	93502	93844
93041	93517	93859
93054	93536	93910

The IRAN file is created by an IRAN data preprocessor that combines aircraft acceptance date data and IRAN event data, and that also calculates IRAN interval data by relating information from pairs of consecutive IRAN event records. Prior to executing the IRAN preprocessing program, the acceptance date data and the IRAN event data must be screened to eliminate the excluded aircraft serial numbers. These two data sources are then sorted by serial number and (for the IRAN event data) by calendar date.

The AIE data file is also created by combining data from two sources. Accident and incident data is supplied on magnetic tape, while the EUMR data is obtained from a separate source on cards. Both data sources must be screened to eliminate the excluded serial numbers and the card records must be reformatted to match the format of the tape data. The two files are then sorted and merged to produce the AIE file used as input to the data bank.

Details of data reduction/file generation processes for the 66-1, 65-110, AIE, and IRAN files are contained in Paragraphs 2.2, 2.3, 2.4, and 2.5, respectively.

## 2.2 AFM 66-1 FILE GENERATION

Since the AFM 66-1 file contains maintenance data that is not relevant to the present maintenance study, these extraneous data records must be screened out. Following

the screening of each individual tape, the data is sorted into an ordered sequence, then merged with other AFM 66-1 screened and sorted tapes. Experience has shown that many records within the composite file are duplicates; these are eliminated. Finally, only data for a specified set of aircraft serial numbers is required for the data bank. These records are copied to form the final 66-1 file. The logic flow for these programs is shown in Figure 2-1.

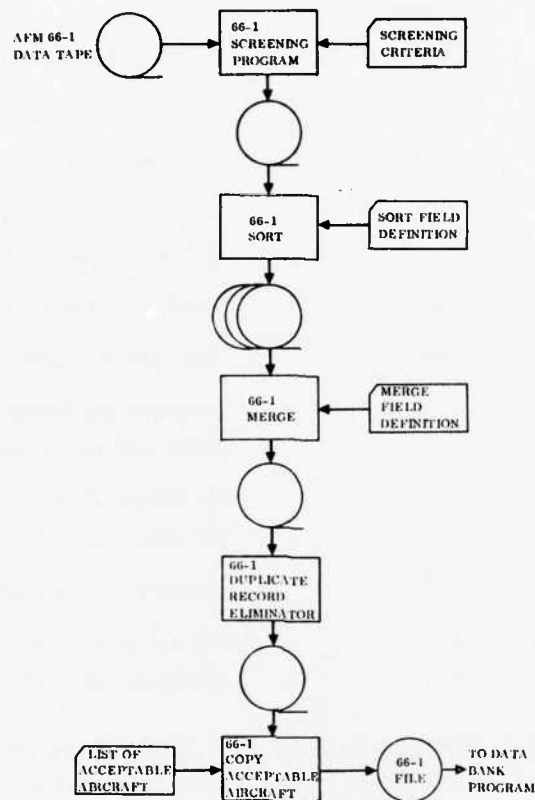


Figure 2-1. Logic Flow of AFM 66-1 File Generation

### 2.2.1 AFM 66-1 SCREEN

2.2.1.1 Purpose. This program, written in COBOL, screens the AFM 66-1 data tapes to eliminate unnecessary and unacceptable records and writes acceptable records on magnetic tape for further processing.

2.2.1.2 Input Data and Procedures. The program, a sample of card data input, and the associated job control language (JCL) for use on the IBM 370 are listed in Paragraph 6.1.1.

Input to the program consists of the raw AFM 66-1 tape and a deck of cards containing the screening criteria. Record layouts for the input on AFM 66-1 tapes are shown in Figure 2-2. The tape consists of 90-character data records, blocked 30 to a tape record. The screening criteria card data consists of a deck containing (in order) the data listed on the following page.

<u>Card</u>	<u>Column</u>	<u>Description</u>
a	1-4	Acceptable Aircraft Mission and Design
b	1	Acceptable Identification
c	1-2	Number of Rejected Aircraft
d	1-8	Rejected Aircraft Serial Numbers (Number of Cards Set by Card c)
e	1-8	Lowest Acceptable Serial Number
f	1-8	Highest Acceptable Serial Number
g	1-2	Number of Rejected How- Malfunction Codes
h	1-3	Rejected How-Malfunction Codes (Number of Cards Set by Card g)
i	1-2	Number of Rejected Action-Taken Codes
j	1	Rejected Action-Taken Codes (Number of Cards Set by Card i)

The program first opens the input and output files, reads and stores the screening data, then reads the first AFM 66-1 data record and checks for an acceptable Mission and Design designation, a numeric How-Malfunction code, a valid numeric date, and a non-blank serial number. Then the record is checked for unacceptable How-Malfunction code and Action-Taken code, and the serial number is checked for a full complement of eight digits. In seven-digit numbers, an additional zero is inserted after the second digit.

After confirming the presence of eight digits, the serial number is checked against the highest and lowest acceptable serial number and the list of unacceptable serial numbers for appropriate action. Finally the day number is computed, using 1 January 1965 as Day 1, and inserted into Columns 86 through 89 of the record. The verified record is then written on an output file and the process repeated with the next input record. When the last input record is screened, the remainder of the tape record is filled by nines and the input and output files are closed.

Figure 2-3 shows the screening criteria used in the F-106 Scheduled Maintenance Study. The program is suitable for use with all AFM 66-1 data files for any USAF aircraft (with the following limitations).

- a. Rejected Aircraft Serial Numbers      25 Maximum
- b. Rejected How-Malfunction Codes        8 Maximum
- c. Rejected Action-Taken Codes            8 Maximum



ADPE RECORD LAYOUT (130 COLUMNS)										JOB NUMBER										DOSSE										SYSTEM										TAPE NUMBER										INSTRUCTIONS										PAGE 1 OF 2 PAGES																																																	
TITLE										APN 56-1 MAINTENANCE DATA										STANDARD FILE										RECORD										OTHER										OTHER										OTHER																																																	
JOB IDENTIFICATION NUMBER										DATE THIS TAPE WRITTEN										REEL SEQUENCE										DENSITY										FILE NAME (BLOCKS)										FROM PREVIOUS TRAILER										RECORD										STANDARD ATLC TAPE LABEL										DENSITY (COL. M): 7 = 556 BITS PER INCH 8 = 900 BITS PER INCH																													
LABEL ID										CARRIAGE CONTROL										JOB IDENTIFICATION NUMBER										DATE THIS TAPE WRITTEN										REEL SEQUENCE										DENSITY										FILE NAME (BLOCKS)										FROM PREVIOUS TRAILER										RECORD										STANDARD ATLC TAPE LABEL										DENSITY (COL. M): 7 = 556 BITS PER INCH 8 = 900 BITS PER INCH									
MISSION										DESIGN										SERIES										COMMAND										RACE										ENV.										EQUIP. PLANNING										STORAGE OF LANDINGS										MONTH CODE A-L										CONSTANT										RECORD LAYOUT NO. 1									
MISSION										DESIGN										SERIES										COMMAND										RACE										ENV.										EQUIP. PLANNING										STORAGE OF LANDINGS										MONTH CODE A-L										CONSTANT										RECORD LAYOUT NO. 1									
MISSION										DESIGN										SERIES										COMMAND										RACE										ENV.										EQUIP. PLANNING										STORAGE OF LANDINGS										MONTH CODE A-L										CONSTANT										RECORD LAYOUT NO. 1									
MISSION										DESIGN										SERIES										COMMAND										RACE										ENV.										EQUIP. PLANNING										STORAGE OF LANDINGS										MONTH CODE A-L										CONSTANT										RECORD LAYOUT NO. 1									
MISSION										DESIGN										SERIES										COMMAND										RACE										ENV.										EQUIP. PLANNING										STORAGE OF LANDINGS										MONTH CODE A-L										CONSTANT										RECORD LAYOUT NO. 1									
MISSION										DESIGN										SERIES										COMMAND										RACE										ENV.										EQUIP. PLANNING										STORAGE OF LANDINGS										MONTH CODE A-L										CONSTANT										RECORD LAYOUT NO. 1									
MISSION										DESIGN										SERIES										COMMAND										RACE										ENV.										EQUIP. PLANNING										STORAGE OF LANDINGS										MONTH CODE A-L										CONSTANT										RECORD LAYOUT NO. 1									
MISSION										DESIGN										SERIES										COMMAND										RACE										ENV.										EQUIP. PLANNING										STORAGE OF LANDINGS										MONTH CODE A-L										CONSTANT										RECORD LAYOUT NO. 1									
MISSION										DESIGN										SERIES										COMMAND										RACE										ENV.										EQUIP. PLANNING										STORAGE OF LANDINGS										MONTH CODE A-L										CONSTANT										RECORD LAYOUT NO. 1									
MISSION										DESIGN										SERIES										COMMAND										RACE										ENV.										EQUIP. PLANNING										STORAGE OF LANDINGS										MONTH CODE A-L										CONSTANT										RECORD LAYOUT NO. 1									
MISSION										DESIGN										SERIES										COMMAND										RACE										ENV.										EQUIP. PLANNING										STORAGE OF LANDINGS										MONTH CODE A-L										CONSTANT										RECORD LAYOUT NO. 1									
MISSION										DESIGN										SERIES										COMMAND										RACE										ENV.										EQUIP. PLANNING										STORAGE OF LANDINGS										MONTH CODE A-L										CONSTANT										RECORD LAYOUT NO. 1									
MISSION										DESIGN										SERIES										COMMAND										RACE										ENV.										EQUIP. PLANNING										STORAGE OF LANDINGS										MONTH CODE A-L										CONSTANT										RECORD LAYOUT NO. 1									
MISSION										DESIGN										SERIES										COMMAND										RACE										ENV.										EQUIP. PLANNING										STORAGE OF LANDINGS										MONTH CODE A-L										CONSTANT										RECORD LAYOUT NO. 1									
MISSION										DESIGN										SERIES										COMMAND										RACE										ENV.										EQUIP. PLANNING										STORAGE OF LANDINGS										MONTH CODE A-L										CONSTANT										RECORD LAYOUT NO. 1									
MISSION										DESIGN										SERIES										COMMAND										RACE										ENV.										EQUIP. PLANNING										STORAGE OF LANDINGS										MONTH CODE A-L										CONSTANT										RECORD LAYOUT NO. 1									
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MISSION										DESIGN										SERIES										COMMAND										RACE										ENV.										EQUIP. PLANNING										STORAGE OF LANDINGS										MONTH CODE A-L										CONSTANT										RECORD LAYOUT NO. 1									
MISSION										DESIGN										SERIES										COMMAND										RACE										ENV.										EQUIP. PLANNING										STORAGE OF LANDINGS										MONTH CODE A-L										CONSTANT										RECORD LAYOUT NO. 1									
MISSION										DESIGN										SERIES										COMMAND										RACE										ENV.										EQUIP. PLANNING										STORAGE OF LANDINGS										MONTH CODE A-L										CONSTANT										RECORD LAYOUT NO. 1									
MISSION										DESIGN										SERIES										COMMAND										RACE										ENV.										EQUIP. PLANNING										STORAGE OF LANDINGS										MONTH CODE A-L										CONSTANT										RECORD LAYOUT NO. 1									
MISSION										DESIGN										SERIES										COMMAND										RACE										ENV.										EQUIP. PLANNING										STORAGE OF LANDINGS										MONTH CODE A-L										CONSTANT										RECORD LAYOUT NO. 1									
MISSION										DESIGN										SERIES										COMMAND										RACE										ENV.										EQUIP. PLANNING										STORAGE OF LANDINGS										MONTH CODE A-L										CONSTANT										RECORD LAYOUT NO.									





[illegible][illegible]

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**2.2.1.3 Output Description.** The sample output, Figure 2-4, shows the same format as the AFM 66-1 data tapes, with the addition of the day number in Columns 86 through 89.

Experience with F-106 AFM 66-1 data tapes on the IBM 370 using 9-track, 1600 bpi tape drives indicates a yield of some 30,000 acceptable records from a total of about twice that number from each input tape. The screening process typically requires five to ten minutes of elapsed computer time. Without exception, a single reel of input was screened onto a single reel of output tape.

## **2.2.2 AFM 66-1 SORT**

**2.2.2.1 Purpose.** This IBM utility program sorts the screened AFM 66-1 data tape into an ordered file.

**2.2.2.2 Input Data and Procedures.** The JCL control cards for the IBM utility program and a sample of card data input for use on the IBM 370 are shown in Paragraph 6.1.2. The input consists of card data defining the sort fields, sort characteristics, and the screened AFM 66-1 data tape. The sort fields are all defined as character fields in ascending order and are shown in the following list in order of hierarchy.

<u>Field</u>	<u>Column</u>	<u>Description</u>
1	15-22	Serial Number
2	86-89	Day Number
3	46-50	Work Unit Code
4	53-55	How-Malfunction Code
5	51-52	Action-Taken and When-Discovered Code
6	56-84	*
7	23-45	*

\*Fields 6 and 7 are necessary to ensure that any duplicated records will be placed in adjacent order in the output file.

**2.2.2.3 Output Description.** The sample output, Figure 2-5, shows the same format as the screened output: 90-character data record, blocked 30 to a tape record.

Experience with the sorting of screened F-106 AFM 66-1 tapes on the IBM 370 using 9-track, 1600 bpi tape drives, typically required three to five minutes of elapsed computer time.





### 2.2.3 AFM 66-1 MERGE

2.2.3.1 Purpose. This IBM utility program merges the screened and sorted AFM 66-1 data tapes into a single file of data.

2.2.3.2 Input Data and Procedures. The JCL control cards for the IBM utility program and a sample of card data input for use on the IBM 370 are listed in Paragraph 6.1.3. The input card data is identical to that used in the AFM 66-1 Sort.

2.2.3.3 Output Description. Merging of 48 F-106 AFM 66-1 screened and sorted tapes on the IBM 370 using 9-track, 1600 bpi tape drives required a total of eight merges, each routine merging seven tapes. In the first step, seven screened and sorted tapes were merged (generally to one, occasionally to two tape reels). This was repeated for each group of seven tapes. These steps required 5 to 10 minutes of clock time. The final step, merging these intermediate tapes, required 20 to 30 minutes of elapsed computer time, and the file consisted of five data tapes. The total file contained approximately 1,600,000 records. The output tape has 90 characters to a data record, blocked 30 to a tape record and has identical format to that of the AFM 66-1 sort output data tape.

### 2.2.4 AFM 66-1 ELIMINATE DUPLICATE RECORDS

2.2.4.1 Purpose. This COBOL program eliminates duplicate records from the screened, sorted, and merged AFM 66-1 file.

2.2.4.2 Input Data and Procedures. The JCL control cards for use on an IBM 370 and the program are listed in Paragraph 6.1.4.

The input consists of the screened, sorted, and merged AFM 66-1 data tapes. The program opens the input and output files and reads and stores the first data record. The next record is then read and compared to the previous record. If all 90 characters are identical, the second record is moved over the first, the next record read, and the process repeated. If they are dissimilar, the first record is passed to the output file and the second record is stored for the next comparison. Upon detection of a series of nines on the input, the remainder of the output block is filled with nines and both input and output files closed.

2.2.4.3 Output Description. Screening, sorting, and merging of some 1,600,000 F-106 AFM 66-1 records yielded over 100,000 duplicate records. The number of duplicated records is displayed on the computer console. The program required 30 to 60 minutes of elapsed computer time, and required four output data tapes. The record layout and the blocking factor are unchanged from the AFM 66-1 sort.



## 2.2.5 AFM 66-1 COPY ACCEPTABLE AIRCRAFT

**2.2.5.1 Purpose.** During the initial screening of the AFM 66-1 data tapes, records for a specified set of aircraft serial numbers were deleted. During formulation of the data bank, only data for a specific fleet of aircraft is necessary. This COBOL program writes these acceptable aircraft records on a magnetic tape to form the new AFM 66-1 file.

**2.2.5.2 Input Data and Procedures.** The JCL control cards, the program, and a sample of the card data input are listed in Paragraph 6.1.5. The input consists of card data defining the acceptable aircraft serial numbers. The first card defines the number of acceptable serial numbers, and subsequent cards define the serial numbers in ascending sequence.

<u>Card</u>	<u>Column</u>	<u>Description</u>
a	1-3	Number of Acceptable Aircraft
b	1-8	Acceptable Serial Numbers (ascending sequence)

The complete list of acceptable aircraft is shown in Table 2-4 and a sample input to this program in Figure 2-6. The program input and output files are opened, and the list of acceptable aircraft serial numbers is stored in the computer memory. The AFM 66-1 data file is read and records with an acceptable serial number are written on the output file. On detection of the last input record, the remainder of the output block is

Table 2-4. Tail Numbers of Acceptable Aircraft

```
T/P DT01      18.23.21 72/073 BLK CNT 020 LENGTH 090  CONTROL 2090
.....1.....2.....3.....4.....5.....6.....
150-
57000231
57000232
57000235
57000236
57000237
57000243
57000244
57002455
57002456
57002458
57002459
57002463
57002470
57002473
57002476
57002477
57002482
57002483
57002485
57002486
57002490
57002491
```

Table 2-4. Tail Numbers of Acceptable Aircraft, Continued

T/P DT01 18.23.21 72/073 BLK CNT 020 LENGTH 080 CONTROL 2080

	1	2	3	4	5	6
57002493						
57002494						
57002496						
57002503						
57002504						
57002505						
57002508						
57002509						
57002515						
57002517						
57002520						
57002524						
57002527						
57002528						
57002532						
57002533						
57002537						
57002538						
57002540						
57002543						
57002545						
57002546						
58000760						
58000766						
58000767						
58000772						
58000773						
58000776						
58000777						
58000778						
58000780						
58000781						
58000783						
58000785						
58000786						
58000788						
58000792						
58000797						
58000900						
58000901						
58000903						
58000904						
59000002						
59000003						
59000004						
59000005						
59000006						
59000007						
59000008						
59000010						
59000012						
59000015						
59000016						
59000018						
59000019						
59000024						
59000025						
59000026						
59000027						
59000028						
59000030						
59000031						
59000033						
59000035						



Table 2-4. Tail Numbers of Acceptable Aircraft, Continued

T/P DT01 18.23.21 72/073 BLK CNT 020 LENGTH 080 CONTROL Z080

	1	2	3	4	5	6
59000043						
59000044						
59000046						
59000048						
59000051						
59000052						
59000053						
59000054						
59000056						
59000057						
59000058						
59000059						
59000060						
59000063						
59000064						
59000065						
59000067						
59000069						
59000072						
59000074						
59000076						
59000078						
59000080						
59000082						
59000084						
59000085						
59000088						
59000090						
59000092						
59000094						
59000095						
59000096						
59000099						
59000103						
59000104						
59000105						
59000109						
59000109						
59000110						
59000115						
59000116						
59000119						
59000126						
59000127						
59000128						
59000130						
59000132						
59000133						
59000137						
59000138						
59000140						
59000141						
59000143						
59000144						
59000145						
59000146						
59000147						
59000149						
59000151						
59000152						
59000153						
59000155						
59000157						
59000164						

[illegible]

filled with nines and the input and output files are closed. A count of the number of records read and records copied is displayed on the computer console.

**2.2.5.3 Output Description.** The record layout and the blocking factor are unchanged from the AFM 66-1 Sort. Experience with the AFM 66-1 file for the F-106 on the IBM 370 for a file of approximately 1,500,000 records produced some 1,010,000 records that were copied for the AFM 66-1 data bank. The program required 20 to 40 minutes of elapsed computer time and required three output data tapes.

The AFM 65-110 file contains data that is not relevant to the present maintenance study and it is necessary to screen\* out these extraneous data records. Following

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the screening process, the file is sorted into an ordered sequence, then merged with other similar AFM 65-110 screened and sorted tapes. Experience has shown that many of the records are duplicated; these are removed. Finally, only data for a specified set of aircraft serial numbers is required for the data bank, and these records are copied to form the final AFM 65-110 file. The logic flow for these programs is shown in Figure 2-7.

### 2.3.1 AFM 65-110 SCREEN

2.3.1.1 Purpose. This program, written in COBOL, screens the AFM 65-110 data tapes to eliminate unnecessary and unacceptable records and writes acceptable records on magnetic tape for further processing.

2.3.1.2 Input Data and Procedures. The program, a sample of card data input, and the associated job control language (JCL) for use on the IBM 370 are shown in Paragraph 6.2.1. Input to the program consists of the raw AFM 65-110 tape and a deck of cards containing the screening criteria. The record layouts for the AFM 65-110 tape are shown in Figure 2-8. The tape consists of 60-character data records, blocked 50 to a tape record. The screening criteria card deck consists of a deck containing, in order, the following.

<u>Card</u>	<u>Column</u>	<u>Description</u>
a	1-4	Acceptable Aircraft Mission and Design
b	1-2	Number of Rejected Aircraft
c	1-8	Rejected Aircraft Serial Numbers (Number of Cards Set by Card b)
e	1-8	Lowest Acceptable Serial Number
f	1-8	Highest Acceptable Serial Number
g	1	Maintenance Code Corresponding to Periodic Inspection
	2-6	Work Unit Code for Periodic Inspection
	11	Maintenance Code Corresponding to Hourly Postflight Inspection
	12-16	Work Unit Code for Hourly Postflight Inspection

The program opens the input and output files, reads and stores the screening data, then reads the first AFM 65-110 data record and checks for an acceptable Mission and Design designation, a valid date, and a non-blank serial number. Then the serial number is checked against the highest and lowest acceptable serial numbers and the

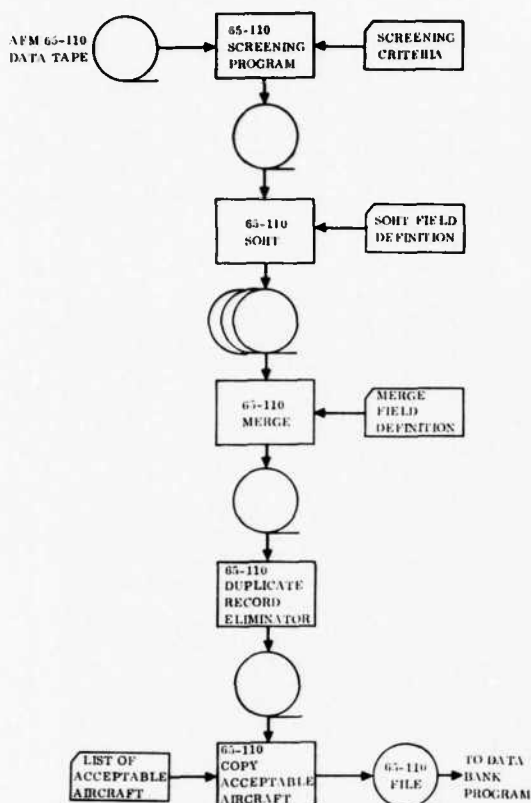


Figure 2-7. Logic Flow of AFM 65-110 File Generation

list of unacceptable serial numbers for appropriate action. If the WUC field is blank, the Maintenance Code field is tested for a code corresponding to the Periodic Inspection or Hourly Postflight Inspection and the appropriate WUC entered into the output record. Finally, the day number is computed using 1 January 1965 as day number 1 and inserted into Columns 49 through 52 of the output record. Upon screening of the last input record, the remainder of the life record is filled by nines and the input and output files closed. Figure 2-9 shows the screening criteria used in the F-106 Scheduled Maintenance Study.

The program is suitable for use with all USAF aircraft with the following program dimension limitation: a maximum of 25 rejected aircraft serial numbers is allowed.

**2.3.1.3 Output Description.** The sample output, Figure 2-10, shows the same format as the AFM 65-110 data tapes, with the addition of the day number in Columns 49 through 52.

Experience with the F-106 AFM 65-110 data tapes on the IBM 370 indicates approximately 8,000 acceptable records are available from a total of 10,000 records on each input tape. The screening process required two minutes of computer time.

### 2.3.2 AFM 65-110 SORT

**2.3.2.1 Purpose.** This IBM utility program sorts the screened AFM 65-110 data tape into an ordered file.

**2.3.2.2 Input Data and Procedures.** The JCL control cards for the IBM utility program and a sample of card data input for use on the IBM 370 are listed in Paragraph 6.2.2. The input consists of card data defining the sort fields, sort characteristics,

**RECORDS AND WORK AREAS** AFM 65-110  
(60 CPR/3000 CPB)

FORM 5048 (REV. 7-70)

RECORD NAME		Record Type 1--Possessed Hours																													
FIELD NAME	MDS	Mission	Design	Series	Mod. Mts.	Class. Mts.	Kind	Type	Number	Command	Station	Code	Assign./Status	Code	SEA/LTF	AMA Code	Geog. Area	Pos. Hrs.	Hours	Tenth	Serial Number	Date	Rcd. ID								
CHARACTER POSITION	MDS	Mission	Design	Series	Mod. Mts.	Class. Mts.	Kind	Type	Number	Command	Station	Code	Assign./Status	Code	SEA/LTF	AMA Code	Geog. Area	Pos. Hrs.	Hours	Tenth	Serial Number	Date	Rcd. ID								
		1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0

RECORD NAME		Record Type 2--Maintenance Data (NORM-NORS)																													
FIELD NAME	MDS	Mission	Design	Series	Mod. Mts.	Class. Mts.	Kind	Type	Number	Command	Station	Code	Assign./Status	Code	SEA/LTF	AMA Code	Geog. Area	Main Lab.	Hours	Tenth	Work Unit	Code	Serial Number	Date	Rcd. ID						
CHARACTER POSITION	MDS	Mission	Design	Series	Mod. Mts.	Class. Mts.	Kind	Type	Number	Command	Station	Code	Assign./Status	Code	SEA/LTF	AMA Code	Geog. Area	Main Lab.	Hours	Tenth	Work Unit	Code	Serial Number	Date	Rcd. ID						
		1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0

RECORD NAME		Record Type 3-6--Utilization Data																													
FIELD NAME	MDS	Mission	Design	Series	Mod. Mts.	Class. Mts.	Kind	Type	Number	Command	Station	Code	Assign./Status	Code	SEA/LTF	AMA Code	Geog. Area	Mts. Symbol	Flight Hrs.	Landings	Sorties	Serial Number	Date	Rcd. ID							
CHARACTER POSITION	MDS	Mission	Design	Series	Mod. Mts.	Class. Mts.	Kind	Type	Number	Command	Station	Code	Assign./Status	Code	SEA/LTF	AMA Code	Geog. Area	Mts. Symbol	Flight Hrs.	Landings	Sorties	Serial Number	Date	Rcd. ID							
		1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0

Figure 2-8. AFM 65-110 Tape Record Layouts

**80 COLUMN GENERAL PURPOSE FORM**

JOB TITLE _____						PAGE _____ OF _____	
JOB NO. _____						DATE _____	
FUNCTION _____						ANALYST _____	

1-10	11-20	21-30	31-40	41-50	51-60	61-70	71-80
1	2	3	4	5	6	7	8
F106 13 57000234 57000239 57000240 57001523 57002507 57002513 57002516 57002519 57002523 57002529 58000795 59000061 59000150 57000001 59999999 603300							

Figure 2-9. Sample Input — AFM 65-110 Screening Criteria

and the screened AFM 65-110 data tape. The sort fields are all defined as character fields in ascending order. The sort fields in order of hierarchy are:

Field	Column	Description
1	39-46	Serial Number
2	49-52	Day Number
3	59	Record ID
4	34-38	Work Unit Code or Landing and Sorties
5	29	Maintenance Code or Mission Symbol
6	1-27	*
7	30-33	*

\* Fields 6 and 7 are necessary to ensure that any duplicated records will be placed in adjacent order in the output file.

**2.3.2.3 Output Description.** The output tape file structure consists of 60-character data records, blocked 50 to a tape record. Sample output is shown in Figure 2-11. Two minutes of IBM 370 time was required to screen a typical F-106 AFM 65-110 tape.

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### 2.3.3 AFM 65-110 MERGE

2.3.3.1 Purpose. This IBM utility program merges the screened and sorted AFM 65-110 data tapes into a single file.

2.3.3.2 Input Data and Procedures. The input data comprises the screened and sorted AFM 65-110 data tapes and the input card data defining the merge fields. The JCL control cards for the IBM utility program and a sample of card data input for the IBM 370 are listed in Paragraph 6.2.3. The input card data is identical to that used in the AFM 65-110 Sort, as shown in Paragraph 2.3.2.2.

2.3.3.3 Output Description. Merging of 21 F-106 AFM 65-110 screened and sorted tapes on the IBM 370 required a total of four merges. In the first step, seven screened and sorted tapes were merged to one tape reel. This was repeated for the other 14 tapes. These steps required three to five minutes of elapsed time. The file contained 480,000 records and required one reel of tape. The output format is the same as that used for the AFM 65-110 sort output data tape.

### 2.3.4 AFM 65-110 ELIMINATE DUPLICATE RECORDS

2.3.4.1 Purpose. This COBOL program eliminates duplicate records from the screened, sorted, and merged AFM 65-110 file.

2.3.4.2 Input Data and Procedures. The JCL control cards for use on an IBM 370 and the program are shown in Paragraph 6.2.4. The input consists of the screened, sorted, and merged AFM 65-110 data tapes. Operation is identical to that of the corresponding program for the AFM 66-1 file in Paragraph 2.2.4.2.

2.3.4.3 Output Description. Screening, sorting, and merging of approximately 485,000 F-106 AFM 65-110 records yielded over 36,000 duplicate records. The number of duplicate records is displayed on the IBM 370 and required one output reel. The record layout and the blocking factor are unchanged from the AFM 65-110 sort.

### 2.3.5 AFM 65-110 COPY ACCEPTABLE AIRCRAFT

2.3.5.1 Purpose. During the initial screening of the AFM 65-110 data tapes, records for a specified set of aircraft serial numbers were deleted. During formulation of the data bank, however, only data for a specific fleet of aircraft is necessary. This COBOL program writes these acceptable aircraft records on a magnetic tape to form the new AFM 65-110 file.

2.3.5.2 Input Data and Procedures. The JCL control cards, the program, and a sample of card data input are listed in Paragraph 6.2.5. The input consists of the AFM 65-110 merged file (with any duplicate records removed) and a card deck defining

the acceptable serial numbers. The input card deck and operation of the program are identical to those for the AFM 66-1 file in Paragraph 2.2.5.2.

**2.3.5.3 Output Description.** The output record layout is the same as the AFM 65-110 sort. The F-106 AFM 65-110 file of approximately 480,000 records yielded some 300,000 records for the new AFM 65-110 file, requiring five minutes of computer time and one reel of tape.

## 2.4 AIE FILE GENERATION

The AIE file comprises data from two sources: handwritten Accident/Incident data supplied by SAAMA and magnetic tapes containing Accident/Incident/EUMR data (see Table 2-5). The two sets of data are converted to the same format, the files merged, and any duplicate records removed. Only data for a specified set of aircraft serial numbers is required for the data bank, and these records are copied to form the new AIE file. The logic flow for these programs is shown in Figure 2-12.

Table 2-5. AIE Data Sources

---

1. Source Data Tapes
KAFB        9490
KAFB        10479
KAFB        18609
KAFB        30324
KAFB        38816
2. Other Sources
Listing of F-106 Accident/Incident/EUMR Data - February 1969 through November 1971
Handwritten F-106 Accident Data for 1970 and 1971 (19 records)
Handwritten F-106 Incident Data for 1970 and 1971 (139 records)

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### 2.4.1 ACCIDENT/INCIDENT FORMATTER

**2.4.1.1 Purpose.** This program, written in COBOL, converts the Accident/Incident card data to magnetic tape in a format compatible with the Accident/Incident/EUMR data tapes.

**2.4.1.2 Input Data and Procedures.** The program, a sample of card input, and the associated job control language (JCL) for use in the IBM 370 are listed in Paragraph 6.3.1.



**Figure 2-14. Sample Output -- AI Reformatter**

Experience with the data made available for the F-106 showed many records without a work unit code, and these were discarded. The elapsed computer time to run the Reformatter program was one to two minutes on the IBM 370; the output required one reel of magnetic tape.

#### 2.4.2 AIE SCREEN

2.4.2.1 Purpose. This program, written in COBOL, screens the AIE data tapes to eliminate unnecessary and unacceptable records and to write acceptable records on magnetic tape for further processing. Acceptable records must have correct Mission and Design. Records containing unacceptable serial numbers and bad date information are rejected. The output record has an additional field that contains the day number, using 1 January 1965 as day one.

2.4.2.2 Input Data and Procedures. The program, a sample of card input, and the associated JCL for use on the IBM 370 are listed in Paragraph 6.3.2. Input to the program consists of the raw AIE data tape and a deck of cards containing the screening criteria. The record layout for the input AIE data is shown in Figure 2-15. The tape has 90 characters to a data record, blocked 30 to a tape record. The screening criteria card deck consists of a deck containing the following (in the order shown).

<u>Card</u>	<u>Column</u>	<u>Description</u>
a	1-4	Acceptable Aircraft Mission and Design
b	1-2	Number of Rejected Aircraft
c	1-8	Rejected Aircraft Serial Numbers (Number of cards set by card b)
d	1-8	Lowest Acceptable Serial Number
e	1-8	Highest Acceptable Serial Number

The program opens the input and output files, reads and stores the screening data, then reads the first AIE data record and checks for an unacceptable Mission and Design designation and a valid date. The serial number is then checked against the highest and lowest serial numbers and against the list of unacceptable serial numbers for appropriate action. Finally, the day number is computed, using 1 January 1965 as day one, and inserted into Columns 45 through 48 of the record. The verified record is then written on an output file and the process repeated with the next input record. Upon screening of the last input record, the remainder of the output tape record is filled with nines and the input and output files closed. Figure 2-16 shows the screening criteria used in the F-106 Scheduled Maintenance Study.

The program is suitable for all AIE data tapes for any USAF aircraft, with the following program dimension limitation: a maximum of 25 rejected aircraft serial numbers is allowed.



[illegible]







2.4.3.3 Output Description. The sample output, Figure 2-18, is typical of AIE data. It has the same format as the AIE screened output. Sorting of the F-106 AIE data required one minute of elapsed computer time on the IBM 370.

#### 2.4.4 AIE MERGE

2.4.4.1 Purpose. This IBM utility program merges the screened and sorted AIE data tapes into a single file.

2.4.4.2 Input Data and Procedures. The JCL control cards for this IBM utility program and a sample of card data input for use on the IBM 370 are listed in Paragraph 6.3.4. The input card data is identical to that used in the AIE Sort program.

2.4.4.3 Output Description. The F-106 AIE file required just one computer run to merge the seven input tapes into one. These input tapes comprised the five data tapes (see Table 2-5), a tape generated from the listing input data, and a tape generated from the handwritten input data. The output AIE file had some 3000 records, and the merge required one minute on the IBM 370. The output format is identical to the AIE Sort output.

#### 2.4.5 AIE ELIMINATE DUPLICATE RECORDS

2.4.5.1 Purpose. This COBOL program eliminates duplicate records from the screened, sorted, and merged AIE file.

2.4.5.2 Input Data and Procedures. The JCL control cards for use on the IBM 370 and the program are listed in Paragraph 6.3.5. The input is the merged AIE data tape; operation is identical to that of the AFM 66-1 Eliminate Duplicate Records in Paragraph 2.2.4.2.

2.4.5.3 Output Description. The program detected 10 duplicate records in the F-106 AIE file of approximately 3000 records and required about one minute of IBM 370 time. The output format is identical to that of the AIE Sort in Paragraph 2.4.3.3.

#### 2.4.6 AIE COPY ACCEPTABLE AIRCRAFT

2.4.6.1 Purpose. During the initial screening of the AIE data, records for a specified set of aircraft serial numbers were deleted. During formulation of the data bank, only data for a specific fleet of aircraft is necessary. This COBOL program writes these acceptable records on a magnetic tape to form the new AIE file.



**2.4.6.2 Input Data and Procedures.** The JCL control cards, the program, and a sample of card data input are listed in Paragraph 6.3.6. The input consists of the AIE file and a card deck defining the acceptable serial numbers. The input card deck and operation of the program are identical to that for the AFM 66-1 file in Paragraph 2.2.5.2.

**2.4.6.3 Output Description.** The record layout is unchanged from the AIE Sort program. Experience with the F-106 AIE file of approximately 3000 records yielded some 2000 records for the new AIE file. The program required one to two minutes of IBM 370 time and the output file required one reel of magnetic tape.

## 2.5 IRAN FILE GENERATION

The objective of the IRAN File Generation programs is to combine IRAN event data and aircraft acceptance date data to produce the IRAN data file used as input to the Data Bank program. IRAN interval data is calculated from data on consecutive IRAN event records. The output file includes information on current IRAN event, the following IRAN event, and the included IRAN interval. A printed report of this data is generated. (See Figure 2-19.)

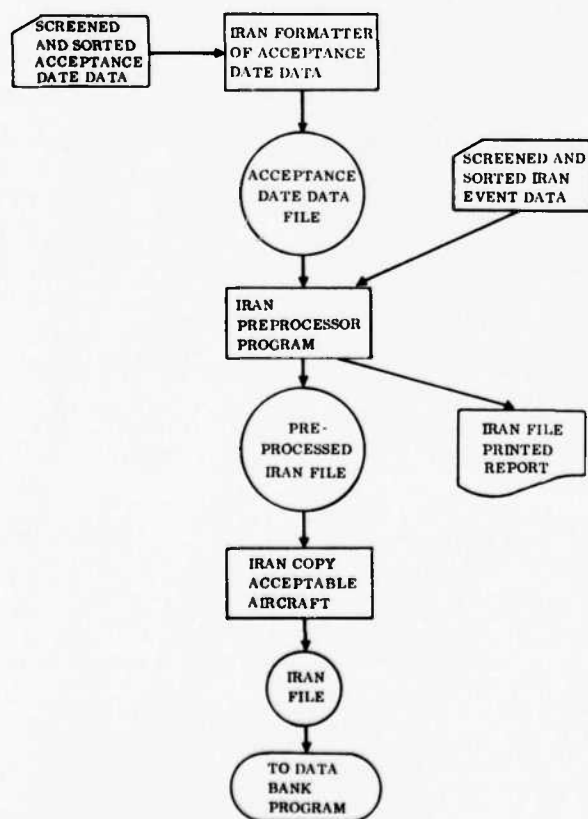


Figure 2-19. Logic Flow of IRAN File Generation

All of the IRAN File Generation programs were developed for the IBM 370 and have been written to be compatible with SAAMA computers. The programs were written using (ANS) COBOL.

The IRAN File Generation task consists of three COBOL programs:

- IRAN Formatter of Acceptance Date Data.
- IRAN Preprocessor.
- IRAN Copy of Acceptable Aircraft.

The IRAN file is subsequently used for input to the Data Bank programs.

### 2.5.1 IRAN FORMATTER OF ACCEPTANCE DATE DATA

**2.5.1.1 Purpose.** The purpose of the IRAN Formatter of Acceptance Date Data program is to convert the serial number

to an eight-digit format and to convert the date to a day number. The converted output, the Acceptance Date Data file, is subsequently used for input to the IRAN Preprocessor program. Paragraph 6.4.1 shows the source program and corresponding job control cards.

**2.5.1.2 Input Data and Procedures.** The card input consists of a deck containing one acceptance date data card for each aircraft. The cards contain:

<u>Column</u>	<u>Data</u>
1-2	First two digits of serial number
3-6	Last four digits of serial number
17-18	Month of acceptance date*
19-20	Day of acceptance date*
21-22	Two-digit year of acceptance date

The record layout is shown in Figure 2-20. The sample card input is:

57 230	060158
57 231	070158
57 232	070158
57 235	080158

**2.5.1.3 Output Description.** Output is an intermediate Acceptance Date Data file containing the converted eight-digit serial number and converted day number. The record layout is shown in Figure 2-20. Records are 80 characters long, blocked 1 to a record. For the F-106 fleet, processing of 265 records took less than one minute on the IBM 370 computer.

## **2.5.2 IRAN PREPROCESSOR**

**2.5.2.1 Purpose.** The purpose of the IRAN Preprocessor is to prepare a Preprocessed IRAN file and an IRAN printed report (Figure 2-19). Paragraph 6.4.2 contains a listing of the source program and corresponding job control cards. The following is a description of the operation of the IRAN Preprocessor program.

An event card is read and the serial number and the start and finish dates are converted. Cumulative flight hours are calculated. An acceptance date record is then read from the Acceptance Date Data file and the serial numbers are compared. If

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\*Values must be punched right-justified within these fields. The values may have leading zeros or blanks.

RECORDS AND WORK AREAS

FORM 5000 (REV. 7-70)

DATE

REVISED DATE

BY

USED BY PROGRAMS

SECTION

IRAN EVENT DATA PREPROCESSOR

RECORD NAME	FILE NO.	BLOCK	DATE
<b>IRAN - FILE OUT (TAPE 80 CHARACTERS BLOCKED 30)</b>			
FIELD NAME			
CHARACTER POSITION			
<div style="display: flex; justify-content: space-between;"> <div> <p>1- AIRCRAFT SERIES (A OR B)</p> <p>2- VISIT NUMBER</p> <p>3- WEEKS AT START OF IRAN</p> <p>4- WEEKS</p> </div> <div> <p>5- ACCEPTANCE DATE</p> <p>6- AIRCRAFT NO.</p> <p>7- CUM. FLIGHT HOURS</p> <p>8- DAY NO.</p> <p>9- DAY NO.</p> <p>10- DAY NO.</p> <p>11- DAY NO.</p> <p>12- DAY NO.</p> <p>13- DAY NO.</p> <p>14- DAY NO.</p> <p>15- DAY NO.</p> <p>16- DAY NO.</p> <p>17- DAY NO.</p> <p>18- DAY NO.</p> <p>19- DAY NO.</p> <p>20- DAY NO.</p> <p>21- DAY NO.</p> <p>22- DAY NO.</p> <p>23- DAY NO.</p> <p>24- DAY NO.</p> <p>25- DAY NO.</p> <p>26- DAY NO.</p> <p>27- DAY NO.</p> <p>28- DAY NO.</p> <p>29- DAY NO.</p> <p>30- DAY NO.</p> </div> </div>			
NOTES ON ABOVE			
<p>1- AIRCRAFT SERIES (A OR B)</p> <p>2- VISIT NUMBER</p> <p>3- WEEKS AT START OF IRAN</p> <p>4- WEEKS</p>			
<p>5- ACCEPTANCE DATE</p> <p>6- AIRCRAFT NO.</p> <p>7- CUM. FLIGHT HOURS</p> <p>8- DAY NO.</p> <p>9- DAY NO.</p> <p>10- DAY NO.</p> <p>11- DAY NO.</p> <p>12- DAY NO.</p> <p>13- DAY NO.</p> <p>14- DAY NO.</p> <p>15- DAY NO.</p> <p>16- DAY NO.</p> <p>17- DAY NO.</p> <p>18- DAY NO.</p> <p>19- DAY NO.</p> <p>20- DAY NO.</p> <p>21- DAY NO.</p> <p>22- DAY NO.</p> <p>23- DAY NO.</p> <p>24- DAY NO.</p> <p>25- DAY NO.</p> <p>26- DAY NO.</p> <p>27- DAY NO.</p> <p>28- DAY NO.</p> <p>29- DAY NO.</p> <p>30- DAY NO.</p>			
<b>IRAN - REPORT</b>			
FIELD NAME			
CHARACTER POSITION			
<div style="display: flex; justify-content: space-between;"> <div> <p>1- AIRCRAFT SERIES (A OR B)</p> <p>2- VISIT NUMBER</p> <p>3- WEEKS AT START OF IRAN</p> <p>4- WEEKS</p> </div> <div> <p>5- ACCEPTANCE DATE</p> <p>6- AIRCRAFT NO.</p> <p>7- CUM. FLIGHT HOURS</p> <p>8- DAY NO.</p> <p>9- DAY NO.</p> <p>10- DAY NO.</p> <p>11- DAY NO.</p> <p>12- DAY NO.</p> <p>13- DAY NO.</p> <p>14- DAY NO.</p> <p>15- DAY NO.</p> <p>16- DAY NO.</p> <p>17- DAY NO.</p> <p>18- DAY NO.</p> <p>19- DAY NO.</p> <p>20- DAY NO.</p> <p>21- DAY NO.</p> <p>22- DAY NO.</p> <p>23- DAY NO.</p> <p>24- DAY NO.</p> <p>25- DAY NO.</p> <p>26- DAY NO.</p> <p>27- DAY NO.</p> <p>28- DAY NO.</p> <p>29- DAY NO.</p> <p>30- DAY NO.</p> </div> </div>			
<p>1- AIRCRAFT SERIES (A OR B)</p> <p>2- VISIT NUMBER</p> <p>3- WEEKS AT START OF IRAN</p> <p>4- WEEKS</p>			
<p>5- ACCEPTANCE DATE</p> <p>6- AIRCRAFT NO.</p> <p>7- CUM. FLIGHT HOURS</p> <p>8- DAY NO.</p> <p>9- DAY NO.</p> <p>10- DAY NO.</p> <p>11- DAY NO.</p> <p>12- DAY NO.</p> <p>13- DAY NO.</p> <p>14- DAY NO.</p> <p>15- DAY NO.</p> <p>16- DAY NO.</p> <p>17- DAY NO.</p> <p>18- DAY NO.</p> <p>19- DAY NO.</p> <p>20- DAY NO.</p> <p>21- DAY NO.</p> <p>22- DAY NO.</p> <p>23- DAY NO.</p> <p>24- DAY NO.</p> <p>25- DAY NO.</p> <p>26- DAY NO.</p> <p>27- DAY NO.</p> <p>28- DAY NO.</p> <p>29- DAY NO.</p> <p>30- DAY NO.</p>			

Figure 2-20. IRAN File Generation Record Layouts (Sheet 1 of 2)

RECORDS AND WORK AREAS		DATE	REVISED DATE	BY	USED BY PROGRAMS	SECTION
IRAN ACCEPTANCE DATE DATA (CARDS-INPUT)						
RECORD NAME	FILE NO.	BLOCK	DATE			
FIELD NAME	NOTE: DATA MUST BE SORTED INTO ASCENDING SERIAL NUMBER ORDER.					
CHARACTER POSITION	NOTE: HARD COLS (23-80) ARE NOT PROCESSED * VALUES MUST BE RIGHT JUSTIFIED WITHIN THESE FIELDS, WITH LEADING ZEROS OR BLANKS.					
2	4	10	2	2	2	5B
IRAN EVENT DATA (INPUT-ONE CARD FOR EACH IFAN EVENT FOR EACH MINCHAFI)						
RECORD NAME	FILE NO.	BLOCK	DATE			
FIELD NAME	NOTE: COLS (74-80) ARE NOT PROCESSED					
CHARACTER POSITION	NOTE: COLS (74-80) ARE NOT PROCESSED					
2	4	10	2	2	2	5B
NOTES ON ABOVE RECORD						
FIELD NAME	* 1 - AIRCRAFT SERIES DESIGNATION (AORR)					
CHARACTER POSITION	* 2 - VALUES MUST BE RIGHT JUSTIFIED IN THESE FIELDS, WITH LEADING ZEROS OR BLANKS.					
2	4	10	2	2	2	5B
IRAN TYPE CODE:						
10 = FULL INVT 61 = SPEEDLINE 1 (EQUIN 7020)						
11 = A23 62 = SPEEDLINE 2 (EQUIN 7020)						
20 = ESSENTIAL INVT 63 = SPEEDLINE 3 (EQUIN 7020)						
30 = LIMITED INVT						
* 3 - AIRCRAFT TYPE (AORR)						
* 4 - AIRCRAFT TYPE (AORR)						
* 5 - AIRCRAFT TYPE (AORR)						
* 6 - AIRCRAFT TYPE (AORR)						
* 7 - AIRCRAFT TYPE (AORR)						
* 8 - AIRCRAFT TYPE (AORR)						
* 9 - AIRCRAFT TYPE (AORR)						
* 10 - AIRCRAFT TYPE (AORR)						
* 11 - AIRCRAFT TYPE (AORR)						
* 12 - AIRCRAFT TYPE (AORR)						
* 13 - AIRCRAFT TYPE (AORR)						
* 14 - AIRCRAFT TYPE (AORR)						
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* 32 - AIRCRAFT TYPE (AORR)						
* 33 - AIRCRAFT TYPE (AORR)						
* 34 - AIRCRAFT TYPE (AORR)						
* 35 - AIRCRAFT TYPE (AORR)						
* 36 - AIRCRAFT TYPE (AORR)						
* 37 - AIRCRAFT TYPE (AORR)						
* 38 - AIRCRAFT TYPE (AORR)						
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* 40 - AIRCRAFT TYPE (AORR)						
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* 82 - AIRCRAFT TYPE (AORR)						
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* 85 - AIRCRAFT TYPE (AORR)						
* 86 - AIRCRAFT TYPE (AORR)						
* 87 - AIRCRAFT TYPE (AORR)						
* 88 - AIRCRAFT TYPE (AORR)						
* 89 - AIRCRAFT TYPE (AORR)						
* 90 - AIRCRAFT TYPE (AORR)						
* 91 - AIRCRAFT TYPE (AORR)						
* 92 - AIRCRAFT TYPE (AORR)						
* 93 - AIRCRAFT TYPE (AORR)						
* 94 - AIRCRAFT TYPE (AORR)						
* 95 - AIRCRAFT TYPE (AORR)						
* 96 - AIRCRAFT TYPE (AORR)						
* 97 - AIRCRAFT TYPE (AORR)						
* 98 - AIRCRAFT TYPE (AORR)						
* 99 - AIRCRAFT TYPE (AORR)						
* 100 - AIRCRAFT TYPE (AORR)						

Figure 2-20. IRAN File Generation Record Layouts (Sheet 2 of 2)

the serial numbers match, the acceptance date is moved to the output record temporary storage area.

All data pertaining to the current IRAN event is moved to the output area. If the acceptance data and IRAN start date are available, the aircraft age is calculated. If IRAN start and finish dates are available, the IRAN duration is calculated. The next IRAN event card is read into the output area fields pertaining to the next IRAN. The serial number and start and finish dates are converted, and cumulative flight hours are calculated. The serial numbers are again compared; if they match, the IRAN interval data in days, weeks, and flight hours is calculated.

The output is written on tape and printed in the report. If the last event card read was for the current serial number, the next event card is read and the second half of this procedure is repeated. If the last event card read was for a different serial number, the entire procedure beginning with retrieval of an acceptance date record is repeated. This cycle is continued until all IRAN event cards have been read and processed.

All fields for which data is missing are filled with the value zero. This will occur for the information on next IRAN and IRAN interval for the last IRAN for each serial number and if particular elements of input data are missing.

**2.5.2.2 Input Data and Procedures.** The input consists of IRAN acceptance date data previously described and IRAN event data cards. The following is a description of the input for IRAN event data (one card for each IRAN event for each aircraft).

<u>Column</u>	<u>Data</u>
1-2	First two digits of serial number
3-6	Last four digits of serial number
7	Aircraft series designation (A or B)
10-11	Month of IRAN start date*
12-13	Day of IRAN start date*
14-15	Two-digit year of IRAN start date
17-18	Month of IRAN completion date*
19-20	Day of IRAN completion date*
21-22	Two-digit year of IRAN completion date

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\*Values must be punched right-justified within these fields. The values may have leading zeros or blanks.



<u>Column</u>	<u>Data</u>
27-30	Cumulative aircraft flight hours at start of IRAN (whole hours)*
32	Cumulative aircraft flight hours at start of IRAN (tenths of an hour — Column 31 may contain a decimal point)
35-36	IRAN type code:
	10 = full IRAN
	11 = ACI
	20 = essential IRAN
	30 = limited IRAN
	61 = Speedline 1 (equivalent to 20)
	62 = Spcedline 2 (equivalent to 20)
	63 = Speedline 3 (equivalent to 30)
70-73	Manhours of labor in IRAN*

The IRAN event data cards must be sorted into ascending serial number and event date order. The following is a sample card input.

57	230A	091064	111664	834.7	10	
57	230A	100465	110965	1041.1	20	
57	230A	100768	122468	1924.8	10	4245
57	231A	092864	120164	920.5	10	
57	231A	101465	111765	1189.1	20	
57	231A	112068	030669	2004.7	10	4507
57	232A	111565	011766	989.6	20	
57	232A	112067	022168	1478.7	10	
57	232A	021670	032970	2036.6	10	4140
57	235A	070665	080665	1002.3	20	
57	235A	072666	091966	1211.0	30	
57	235A	100266	123066	1233.1	20	3676
57	235A	032169	052969	1749.3	10	4463

**2.5.2.3 Output Description.** The output consists of a magnetic tape file (Preprocessed IRAN file) and a corresponding printed IRAN report. The output tape records are 80-character records formatted as follows.

---

\*Values must be punched right-justified within these fields. The values may have leading zeros or blanks.



<u>Position</u>	<u>Data</u>
1-8	Serial number
9	Aircraft series (A or B)
11-15	Acceptance date day number
17	Visit number
19-20	IRAN type code (see description under IRAN event data input formats)
22-26	Cumulative aircraft flight hours and tenths at start of IRAN
28-30	Aircraft age in weeks at start of IRAN
32-35	IRAN start date day number
37-40	IRAN completion date day number
42-44	Duration of IRAN (days)
46-49	Manhours of labor in IRAN
51-52	Next IRAN type code (see description under IRAN event data input formats)
54-58	Cumulative aircraft flight hours and tenths at start of next IRAN
60-63	Next IRAN start date day number
65-68	IRAN interval (days)
70-72	IRAN interval (weeks)
74-78	IRAN interval (flight hours and tenths)

Tape output records consist of 80 characters, blocked 30 to a tape record. Figure 2-20 shows the record layout; Figure 2-21 is a sample of the tape output.

The printed output is a report containing the same data fields (in the same order) as the tape output, plus the start and completion dates of the IRAN. The printed output report consists of 120-character data records, blocked 25 to a tape record. Figure 2-20 shows the record layout, and Figure 2-22 is a sample of the printed output report tape. For the F-106 fleet, processing of 265 records took approximately one minute on the IBM 370.

### 2.5.3 IRAN COPY ACCEPTABLE AIRCRAFT

**2.5.3.1 Purpose.** The purpose of the IRAN Copy Acceptable Aircraft program is to select acceptable aircraft serial numbers for input to the data bank.





**2.5.3.2 Input Data and Procedures.** The JCL cards, the program, and a sample of card data input are shown in Paragraph 6.4.3. The input consists of the Preprocessed IRAN file and a card deck defining the acceptable aircraft serial numbers. The input card deck and operation of the program are identical to that for the AFM 66-1 file in Paragraph 2.2.5.2.

**2.5.3.3 Output Description.** The record layout is described in Figure 2-20, and a sample of the tape output is shown in Figure 2-21. The IRAN file of 562 records was copied in one minute of elapsed computer time.

## SECTION 3

### DATA BANK GENERATION

#### 3.1 GENERAL DESCRIPTION

Generation of the Data Bank requires six input files:

- a. AFM 66-1 Data File
- b. AFM 65-110 Data File
- c. AIE Data File
- d. IRAN Data File
- e. WUC Data File
- f. Data Bank Control Data

Preparation of the first four files was covered in Section 2. This section is concerned with the preparation of the WUC data file, the Data Bank Control Data, the Data Bank program, and the WUC Conversion program. Preparation of the WUC data file was made more complex because of revisions in WUC designation during the period which the Data Bank covers. Additional programs have been developed to first check the WUCs that are processed in the Data Bank, then to convert the WUCs prior to the changeover to the new designation. The logic flow for generating the Data Bank is shown in Figure 3-1.

#### 3.2 WUC FILE GENERATION

The WUC data file comprises the five-digit WUC records and must be sorted into ascending order on the work unit code field. The Data Bank program uses the WUC file as one of the input files. (See Figure 3-1.) If the WUC designation is changed during the period covered by the Data Bank, the Acceptable WUC representing the codes will be printed in the final output. The logic flow of the WUC file generation is shown in Figure 3-2. If there are no changes in WUC designations, the Sort WUC for Conversion and WUC Merge steps should be bypassed, and the WUC for conversion as input data would not be available.

##### 3.2.1 SORT ACCEPTABLE WUC

**3.2.1.1 Purpose.** This IBM Utility program sorts the Acceptable WUC data into an ordered file.

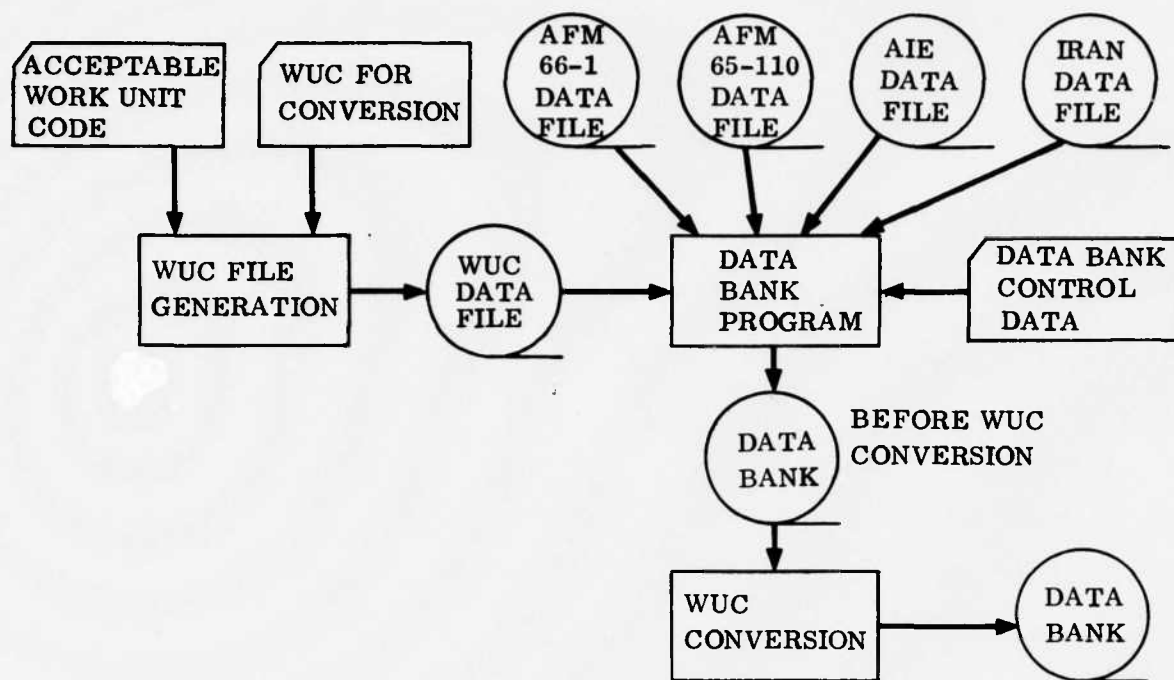


Figure 3-1. Logic Flow — Data Bank Generation

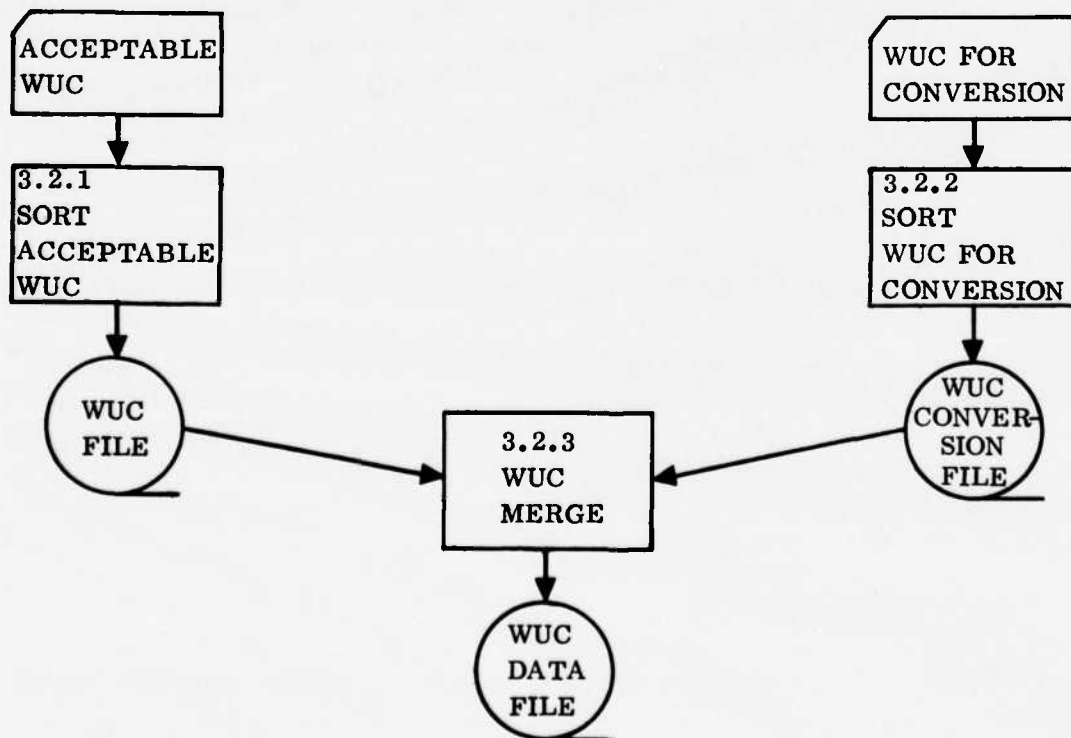


Figure 3-2. Logic Flow — WUC File Generation

**3.2.1.2 Input Data and Procedures.** The job control language (JCL) for the IBM utility program and a sample of card data input for use on the IBM 370 are shown in Paragraph 6.5.1. The format of the input data is given in Figure 3-3, and the listing of WUCs used in the F-106 Scheduled Maintenance Study is given in Table 3-1. The 20-character data record is the minimum record length accepted by the IBM 370 Sort Utility program at Convair Aerospace. The Sort key is defined as a character field, in ascending order on Columns 1 through 5.

WUC																			
1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0

Figure 3-3. Format of WUC Record

**3.2.1.3 Output Description.** The sample output, Figure 3-4, has 20-character data records, blocked 50 to a tape record. The time required to sort the 2043 WUCs for the F-106 Scheduled Maintenance Study was less than one minute on the IBM 370 computer.

## 3.2.2 SORT WUC FOR CONVERSION

**3.2.2.1 Purpose.** When the WUC designations have been changed during the period covered by the data bank, it is essential that the list of Acceptable WUCs includes codes that, although obsolete and superseded at the end of the period, had validity at the start of the data bank period. This program sorts these obsolete WUCs in the identical sequence as the list of Acceptable WUC prior to merging of the two files.

**3.2.2.2 Input Data and Procedures.** The JCL for the IBM Utility program and a sample of card data inputs for use with the IBM 370 are shown in Paragraph 6.5.2. The format of the input WUC to be converted is shown in Figure 3-5. This program only uses the Old WUC (i.e., the one to be added to the data bank) but the WUC to supersede it is also included on the input card deck, enabling the same file to be used in a subsequent program. The listings of the "Old WUC," (those to be replaced) and the "New WUC" (those to supersede the old one used in the F-106 Scheduled Maintenance Study) are given in Tables 3-2 and 3-3. The sort data is defined as a character field, in ascending order in Columns 2 through 6.











**Table 3-1. Work Unit Codes, Continued**

[illegible]







Table 3-2. WUC Conversion — Work Unit Codes for Deletion, Continued

T/P	TU12	10-21.11	74/143	BLK	UNT	620	LENGTH	USU	CUNTRUL	2060	0000000	00000000	CM	16000	BLK	8	TOT	8	PAGE	000
74001	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
74002	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
74003	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
74004	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
74005	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
74006	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
74007	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
74008	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
74009	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
74010	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
74011	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
74012	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
74013	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
74014	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
74015	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
74016	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
74017	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
74018	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
74019	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
74020	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
74021	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
74022	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
74023	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
74024	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
74025	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
74026	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
74027	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
74028	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
74029	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
74030	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
74031	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
74032	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
74033	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
74034	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
74035	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
74036	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
74037	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
74038	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
74039	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
74040	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
74041	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

CM 800, BLK 9, TOT 9.



**Table 3-3. WUC Conversion -- Work Unit Codes for Conversion**

[illegible]







**3.3.2 INPUT DATA AND PROCEDURES.** The program, a sample of card data input, and the associated job control language (JCL) for use with the IBM 370 are shown in Paragraph 6.5.4. The input to the program comprises five input data files and the control data. The five input files are:

- a. AFM 66-1 Data File
- b. AFM 65-110 Data File
- c. IRAN Data File
- d. AIE Data File
- e. WUC Data File

The control data consists of a deck of cards with the following format.

<u>Card Type</u>	<u>Column</u>	<u>Description</u>
a	1-2	Scheduled Inspection, 2-Digit WUC
	6-7	Special Inspection, 2-Digit WUC
	11-18	First Aircraft Serial Number to be Processed
	28-30	Last Week Number to be Processed
	32	Mission of Aircraft
	33-35	Design of Aircraft
	36-40	Number of Aircraft to be Processed
b	1-3	Number of Action-Taken Codes (ATC) to Process
c	1	Action-Taken Code (Number of Cards Set by Card b)
d	1-3	Number of Maintenance Codes for NORM and NORS Hours
	4-6	Number of Maintenance Codes for NORM Hours only
e	1	Maintenance Codes (NORM Codes First) (Number of Cards Set by Col. 1-3 of Card d)
f	1-3	Number of 3-Digit WUCs to be Processed
g	1-3	3-Digit WUC (Number Set by Card f)
h	1-3	Number of 2-Digit WUC Groups
	7-10	Number of 5-Digit WUCs to be Processed

<u>Card Type</u>	<u>Column Number</u>	<u>Description</u>
i	1-2	2-Digit WUC Group Identification (ID) (Number of Cards Set by Card h)
	6-10	Position in WUC file of First WUC with Corresponding 2-Digit WUC Group ID
	11-15	Position in WUC file of Last WUC with Corresponding 2-Digit WUC Group ID

A sample set of input data, used for the F-106 Scheduled Maintenance Study, is given in Figure 3-7. All numbers should be right-justified within their designated fields. It is also important that the Maintenance Codes, card type e, be arranged such that codes corresponding to NORM hours be placed ahead of the codes corresponding to NORS hours.

The Data Bank program first opens all input and output files and reads the control data. The four data files are then updated to the first aircraft, and then to the first week for which both AFM 66-1 and AFM 65-110 data is available. All four files are then processed, merging data with a time step of one week. Processing is terminated when the day number in the files reaches the day corresponding to the Last Week, when the next aircraft is processed. This continues until either the end of the 65-110 or 66-1 files or the number of aircraft to be processed is exceeded. On completion, the output tape record is filled with nines, and all files are closed.

The program is suitable for use with the appropriate processed data files for any USAF aircraft with the following program dimension limitations.

- |  |              |
|--|--------------|
| a. Number of Action-Taken Codes                                | 5 Maximum    |
| b. Number of Maintenance Codes                                 | 17 Maximum   |
| c. Number of 3-Digit WUCs                                      | 7 Maximum    |
| d. Number of 2-Digit WUC Groups                                | 22 Maximum   |
| e. Number of WUCs  | 3000 Maximum |
| f. Number of Type 3 Output Records for<br>Serial Number - Week | 250 Maximum  |
| g. Number of Type 4 Output Records for<br>Serial Number - Week | 250 Maximum  |

**3.3.3 OUTPUT DESCRIPTION.** The sample output, Figure 3-8, shows examples of the four types of output records; the format of the data records is given in Figure 3-9. The source of each data item in the four output record types is listed in Table 3-4.

# 80 COLUMN GENERAL PURPOSE FORM

JOB TITLE		ENGINEER		PAGE	
JOB NO.	AWD	END MAP	FUNCTION	ANALYST	DATE
W-1	W-2	W-3	W-4	W-5	W-6
03 04 57000230		557 F106	S		
S					
P					
K					
S					
17.9					
A					
B					
C					
D					
E					
F					
G					
H					
I					
J					
K					
L					
M					
N					
O					
P					
Q					
R					
S					
T					
U					
V					
W					
7					
23A					

# 80 COLUMN GENERAL PURPOSE FORM

JOB TITLE		ENGINEER		PAGE	
JOB NO.	AWD	END MAP	FUNCTION	ANALYST	DATE
W-1	W-2	W-3	W-4	W-5	W-6
23E					
23G					
23D					
23E					
23F					
23E					
22 2301					
11 250					
12 251 238					
13 289 408					
14 409 498					
23 499 745					
41 746 843					
42 844 895					
44 896 919					
45 920 1021					
46 1022 1117					
47 1118 1196					
49 1197 1216					
51 1217 1298					
52 1299 1308					
55 1309 1316					
63 1317 1326					
65 1327 1384					
71 1385 1430					

Figure 3-7. Sample Input — Data Bank Control





[illegible]

**Figure 3-8. Sample Output — Data Bank**

RECORD NAME		DATA RECORD TYPE 1	
HOW SIGNED			
FIELD DEFINITION			
CHARACTER POSITION			
FIELD LENGTH			

RECORD NAME		DATA RECORD TYPE 2	
HOW SIGNED			
FIELD DEFINITION			
CHARACTER POSITION			
FIELD LENGTH			

RECORD NAME		DATA RECORD TYPE 3	
HOW SIGNED			
FIELD DEFINITION			
CHARACTER POSITION			
FIELD LENGTH			

RECORD NAME		DATA RECORD TYPE 4	
HOW SIGNED			
FIELD DEFINITION			
CHARACTER POSITION			
FIELD LENGTH			

Figure 3-9. Record Layouts -- Data Bank

Table 3-4. Data Item Source

<u>RECORD TYPE 1</u>		
Column	Nomenclature	Source Data
1-5	MDS	Input Control Data
6-13	Serial-Number	Any Input File
14-16	Week-Number	Computed From Day-Number from Any Input File
29-32	Flight-Hours	Sum for the Serial Number-Week of Columns 31-33 on 65-110 type 3-9 records
36-39	Sorties	Sum for the Serial Number-Week of Columns 36-37 on 65-110 type 3-9 records
40-43	Landings	Sum for the Serial Number-Week of Columns 34-35 on 65-110 type 3-9 records
49	Record ID	Set to 1
50	Record Mark	
<u>RECORD TYPE 2</u>		
Column	Nomenclature	Source Data
1-5	MDS	Input Control Data
6-13	Serial-Number	Any Input File
14-16	Week-Number	Computer from Day-Number from Any Input File
26-28	IRAN-Visit-No.	Value for the Serial-Number-Week from IRAN File, Columns 19-20
36-39	IRAN-Start-Day	Value for the Serial-Number-Week from IRAN File, Columns 32-35
40-43	IRAN-End-Day	Value for the Serial-Number-Week from IRAN File, Columns 37-40
49	Record ID	Set to 2
50	Record Mark	
<u>RECORD TYPE 3</u>		
Column	Nomenclature	Source Data
1-5	MDS	Input Control Data
6-13	Serial-Number	Any Input File
14-16	Week-Number	Computed from Day-Number from Any Input File
17-21	WUC	Data Records for Serial-Number-Week for the Files: a. 65-110 File, Type 2 Records, Columns 34-38 b. 66-1 File, Columns 46-50 c. AIE File, Columns 10-14
26-28	Maintenance Action	The Sum of 66-1 File, Columns 56-57 for the Serial-Number-Week-WUC Combination
29-32	Labor Hours	The Sum of 66-1 File, Columns 58-61 for the Serial-Number-Week-WUC Combination
33-35	AIE	The Number of AIE Records for the Serial-Number-Week-WUC Combination
36-39	NORM Hours	The Sum of 65-110 File, Type 2 Records, Columns 31-33 for the Serial-Number-Week-WUC and Maintenance Code, Column 39, Corresponding to NORM Codes
40-43	NORS Hours	The Sum of 65-110 File, Type 2 Records, Columns 31-33 for the Serial-Number-Week-WUC and Maintenance Code, Column 39, Corresponding to NORS Code
44-46	ATC Maintenance Actions	The Sum of 66-1 File Columns 56-57 for the Selected ATC from the Input Data for the Serial-Number-Week-WUC Combination
49	Record ID	Set to 3
50	Record Mark	
<u>RECORD TYPE 4</u>		
Column	Nomenclature	Source Data
1-5	MDS	Input Control Data
6-13	Serial-Number	Any Input File
14-16	Week-Number	Computed from Day-Number from Any Input File
17-21	WUC	For the Serial-Number-Week Combination, 66-1 File, Columns 46-50
22	WDC	For the Serial-Number-Week-WUC Combination 66-1 File, Column 52
23-25	HMC	For the Serial-Number-Week-WUC-WDC Combination, 66-1 File, Columns 53-55
26-28	Maintenance Action	The Sum for the Serial-Number-Week-WUC-WDC-HMC Combination, 66-1 File, Columns 56-57
29-32	Labor	The Sum for the Serial-Number-Week-WUC-WDC-HMC Combination, 66-1 File, Columns 58-61
49	Record ID	Set to 4
50	Record Mark	

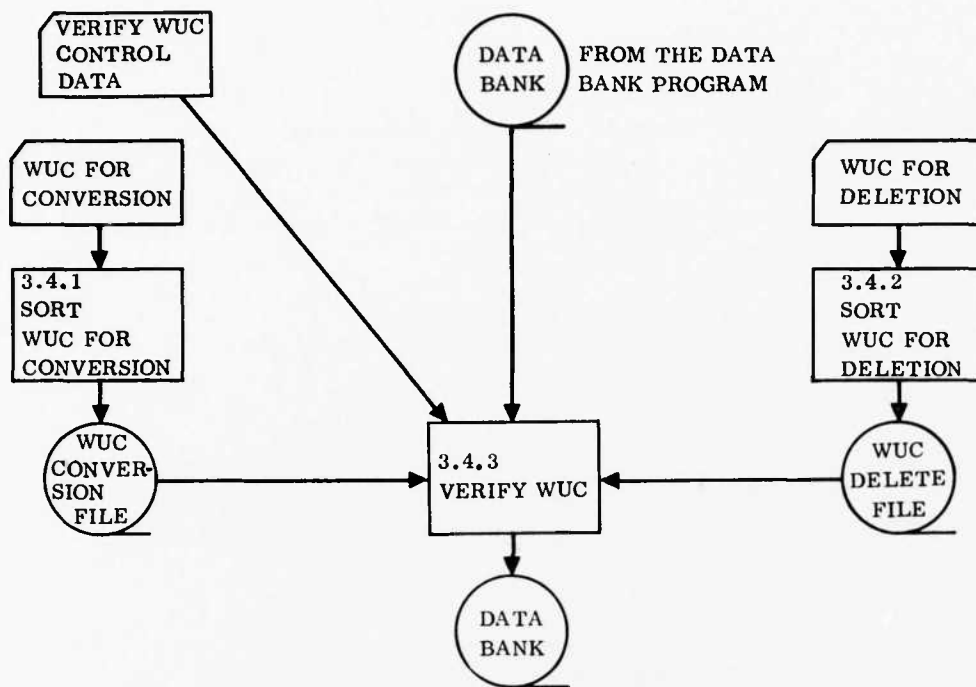


Figure 3-10. Logic Flow — WUC Conversion

The input consists of a tape containing the WUC using the format of Figure 3-5 and should be identical to the one used in Paragraph 3.2.2 and the card data defining the sort field. This is defined as a character field in ascending order. The sort field is:

<u>Field</u>	<u>Column Number</u>	<u>Description</u>
1	2-6	Old WUC

**3.4.1.3 Output Description.** The sample output, Figure 3-11, has 80 characters to a data record, blocked 20 to a tape record. The sort for the 170 WUCs to be converted on the F-106 Data Bank required less than one minute of IBM 370 computer time.

#### **3.4.2 SORT WUC FOR DELETION**

**3.4.2.1 Purpose.** This IBM Utility program sorts the WUCs (which are to be deleted when occurring in records before the week of the change of WUC designation) into an ordered file.

**3.4.2.2 Input Data and Procedures.** The JCL cards for the IBM Utility program and the data cards used on the F-106 Scheduled Maintenance Study are shown in Paragraph 6.5.6.







The program then checks the logical consistency of the WUCs on these two input files. After consistency is verified, the program reads the data bank generated from the Data Bank program to delete those records with the WUCs matching those in the WUC Delete file and to convert those records with WUCs matching those in the WUC Conversion file.

[illegible]

3-28



The program is suitable for use with the Data Bank file for any USAF aircraft (with the following program dimension limitations).

- a. WUCs to be changed                      300 Maximum
- b. WUCs to be deleted                      300 Maximum

**3.4.3.3 Output Description.** The output has the identical format to that of the Data Bank program shown in Figure 3-9. If the two WUC lists are verified, the number of records processed, passed, changed, and dropped are displayed on the console. If the WUC lists are not correct, the errors are listed on an output file. It took eight minutes of IBM 370 time to run the Verify WUC program for the F-106 fleet.

## SECTION 4

### STATISTICAL ANALYSIS PROGRAMS

#### 4.1 GENERAL DESCRIPTION

A group of programs has been developed to perform various statistical analysis tasks using the data bank as input. (Section 3 contains the details of the data bank generation.) Relationship of the statistical analysis program is shown in Figure 4-1. The tasks solved by the statistical analysis programs are:

- a. Frequency Analysis (Task I).
- b. Manhour and NOR Time Analysis (Task II).
- c. Interval Length Analysis (Task III).
- d. Effect of Time after Inspection (Task IV).
- e. Removal Action Analysis (Task V).
- f. Aircraft Inspection Histories.

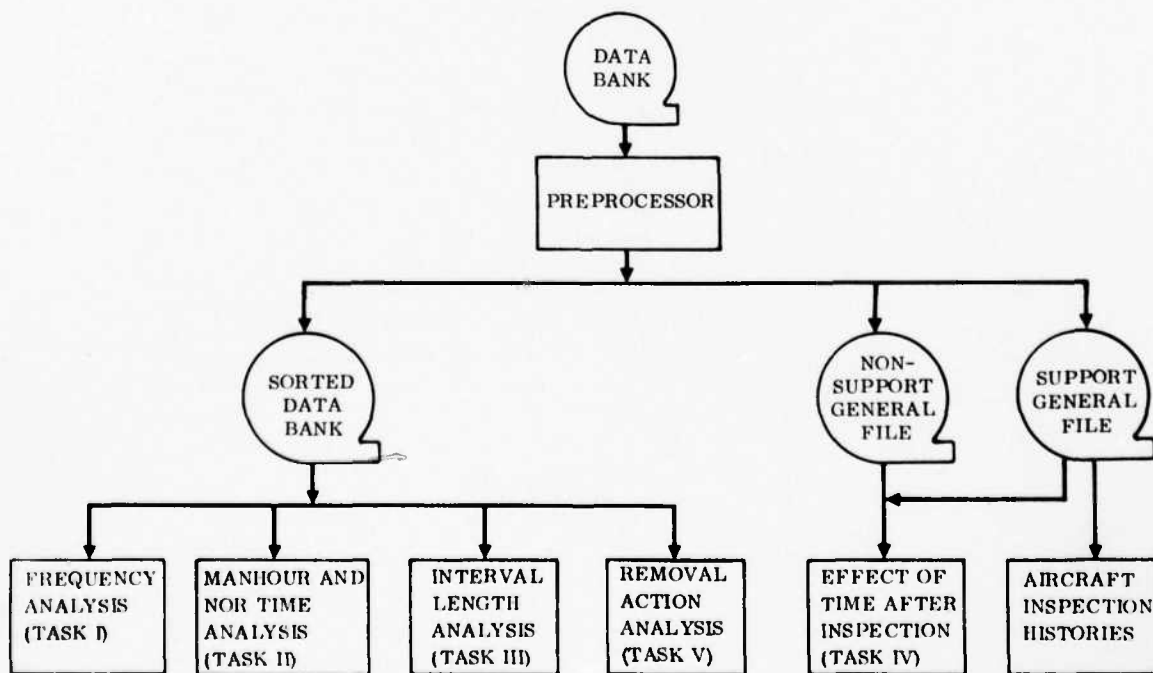


Figure 4-1. Logic Flow — Statistical Analysis Programs

A set of programs, called Preprocessor, was developed to sort and reformat the input data bank (Figure 4-1) into three output files which, in turn, were used to input the six major program modules. The three output files from the Preprocessor are:

- a. Sorted Data Bank.
- b. Non-support General File.
- c. Support General File.

Preprocessor programs are discussed in detail in Paragraph 4.2. Programs for various statistical analysis tasks and Aircraft Inspection Histories are discussed in Paragraphs 4.3 through 4.8.

#### 4.2 PREPROCESSOR PROGRAMS

The Preprocessor programs were developed to reformat and sort the input data bank into three output files (Figure 4-2). All Preprocessor programs were developed for the IBM 370 and have been written to be compatible with SAAMA computers. The Preprocessor Formatter program was written using (ANS) COBOL. Sorting is accomplished by using a standard IBM utility sort program.

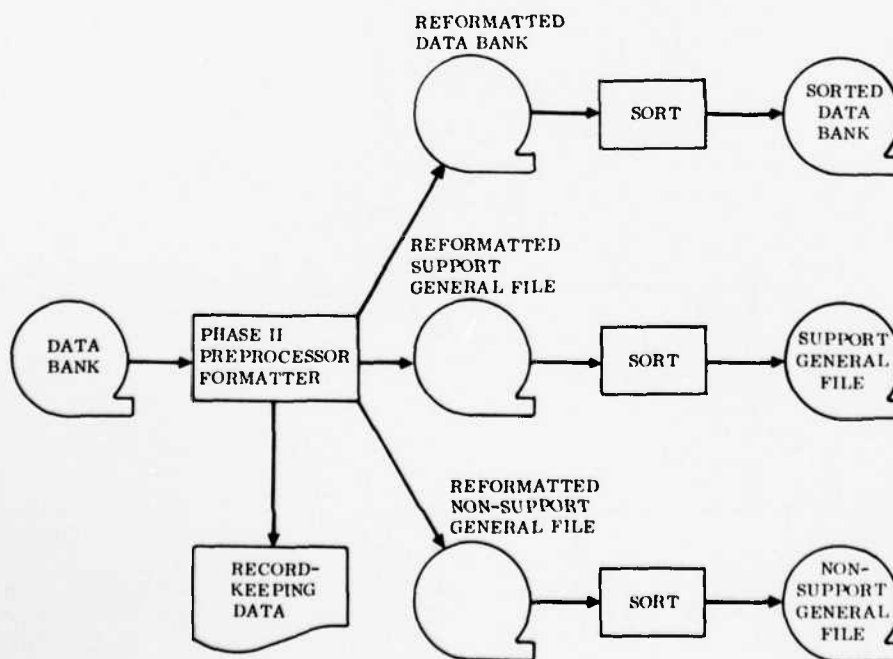


Figure 4-2. Logic Flow — Preprocessor Programs  
4-2

#### 4.2.1 PREPROCESSOR FORMATTER

4.2.1.1 Purpose. The Preprocessor Formatter program was developed to summarize and reformat data records from the input data bank file into three output files, which are then sorted and used as input to subsequent programs (Figure 4-2).

4.2.1.2 Input Data and Procedures. The combined listing of the program and JCL cards is shown in Paragraph 6.6.1. The data bank file, created by the Data Bank programs or the work unit code (WUC) convert program, is the input to the Preprocessor Formatter program. The input data records, consisting of four record types, have been organized in a sequence of aircraft serial number, week number, and record type. (See Figure 3-9 for the Data Bank Record layout.)

The Preprocessor Formatter program reformats data records by transferring flight hours from Type 1 records to Type 3 and Type 4 records. Also, flight hours, sorties, and landings from Type 1 records are summed within an aircraft serial number for a given week and transferred to Type 3 and Type 4 records.

All Type 2 records are skipped by the Preprocessor program. For a specific serial number for a given week, there will be no more than one Type 1 record and no more than 250 Type 3 or Type 4 records. Figure 4-3 shows the detailed program logic.

4.2.1.3 Output Description. Output from the Preprocessor Formatter program consists of three files containing either Type 3 or Type 4 records or both (Figure 4-4). Types contain 70-character data records, blocked 40 to a record. The three files are:

- a. The Reformatted Data Bank file (Type 3 and Type 4 records) from which b and c are separated.
- b. The Support General file (Type 3 records only) with WUC prefixes of 03 and 04.
- c. The Non-Support General file (Type 3 records with WUC prefixes greater than 09 and Type 4 records).

An additional output is the record-keeping listing, which gives Input/Output Totals (Figure 4-5) and Aircraft-Level Subtotals (Figure 4-6).

The single-line input/output totals in Figure 4-5 are described in the following fields.

<u>Field</u>	<u>Column</u>	<u>Description</u>
1	2-8	Data Record Input
2	10-16	Type 3 and 4 Data Records Input
3	18-20	Number of Aircraft



RECORDS AND WORK AREAS										SECTION	
DATE										DATE	
BY										BY	
USED BY PROGRAMS										USED BY PROGRAMS	
FILE NO.										FILE NO.	
BLOCK										BLOCK	
DATE										DATE	
TYPE 3											
RECORD NAME											
FIELD NAME	MDS	SEP	WEEK	WUC	UNIT	LABOR	TIME	TIME	TIME	TIME	TIME
VALUE	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890
CHARACTER POSITION	1	2	3	4	5	6	7	8	9	10	11
PICTURE	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890
TYPE 4											
RECORD NAME											
FIELD NAME	MDS	SEP	WEEK	WUC	UNIT	LABOR	TIME	TIME	TIME	TIME	TIME
VALUE	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890
CHARACTER POSITION	1	2	3	4	5	6	7	8	9	10	11
PICTURE	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890
TYPE 5											
RECORD NAME											
FIELD NAME	MDS	SEP	WEEK	WUC	UNIT	LABOR	TIME	TIME	TIME	TIME	TIME
VALUE	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890
CHARACTER POSITION	1	2	3	4	5	6	7	8	9	10	11
PICTURE	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890

Figure 4-4. Preprocessor Tape Record Layouts

I/P TU25 12.16.51 72/143 BLK CNT UIC LENGTH Q7C CEN7RCL 2070 0000003 0000000 CH 1750, BLK 6, TOT 6 PAGE 003

```

.....1.....2.....3.....4.....5.....6.....7.....8.....9.....0.....1.....2.....3.....
3077 175 175 119 2400 1955 5900164 583 3772
604677 587255 150 83293 503962 17282 332762 254493
6690 425 505 119 2400 1955 5900164 583 3772
604677 587255 150 83293 503962 17282 332762 254493
.....

```

CH 1750, BLK 7, TOT 7.

Figure 4-5. Sample Output — Record-Keeping (Input/Output Totals)

I/P TU25 12.16.51 72/143 BLK CNT OIO LENGTH Q7O CEN7RCL 2070 0000000 0000000 PAGE 001

```

.....1.....2.....3.....4.....5.....6.....7.....8.....9.....0.....1.....2.....3.....
.....0.....0.....0.....0.....0.....0.....0.....0.....0.....0.....0.....0.....0.....0.....0.....
6595 342 345 104 2161 1757 57002231 484 3434
7116 417 415 128 2457 2029 57002235 531 3955
7116 400 400 128 2457 2029 57002235 531 3955
6223 371 371 132 2612 2001 57002236 624 3989
8655 494 493 129 2652 2058 57002237 678 4032
6915 437 437 120 2459 1564 57002243 785 3133
6177 357 360 120 2459 1953 57002244 570 3842
5615 318 318 114 2462 1880 57002455 602 3740
6523 407 398 122 2459 1877 57002456 572 3772
6867 425 443 130 2260 1860 57002458 555 3372
7011 417 417 128 2161 1543 57002459 572 3132
6933 421 421 127 2088 1510 57002463 520 3078
5366 310 314 122 2405 1993 57002476 628 3570
5799 313 313 124 2555 1957 57002473 655 3857
4722 218 280 111 2192 1667 57002476 579 3270
5852 310 313 125 2527 1994 57002477 598 3923
6399 393 390 129 2097 1509 57002482 522 3084
5234 326 329 116 1828 1307 57002483 473 2662
6898 387 387 120 2126 1567 57002485 442 3151
5741 182 182 61 802 557 57002486 325 1130
6725 399 399 129 2065 1484 57002490 579 2970
6782 406 406 127 2124 1542 57002491 551 3115
7895 431 431 131 1068 2058 57002494 633 3961
5862 320 322 114 2536 2058 57002494 633 3961
.....

```

CH 1750, BLK 2, TOT 2.

CH 1750, BLK 3, TOT 3.

Figure 4-6. Sample Output — Record Keeping (Aircraft-Level Subtotals)

<u>Field</u>	<u>Column</u>	<u>Description</u>
4	22-28	Support General Data Records Output
5	30-36	Non-Support General Data Records Output
6	38-44	Type 1 Records Input
7	46-52	Type 3 Records Input/Output
8	54-60	Type 4 Records Input/Output

The Aircraft-Level Subtotals fields are:

<u>Field</u>	<u>Column</u>	<u>Description</u>
1	2-7	Total Flight Hours
2	9-13	Total Sorties
3	15-19	Total Landings
4	21-26	Type 1 Records
5	28-34	Type 3 Records
6	36-42	Type 4 Records
7	44-51	Aircraft Serial Number
8	53-58	Support General Records
9	60-65	Non-support General Records

For the 150-aircraft F-106 fleet, the Preprocessor Formatter program requires approximately ten minutes of IBM 370 computer clock time and two minutes of central processor unit (CPU) time. The input volume is 604,677, the reformatted Data Bank output volume is 587,255, the reformatted Support General volume is 83,293, and the reformatted Non-support General volume is 503,962.

#### 4.2.2 REFORMATTED SUPPORT GENERAL WUC SORT

4.2.2.1 Purpose. This IBM utility program sorts the Support General data records into an ordered file for subsequent use on Task IV Statistical Programs and the Aircraft Inspection Histories Plot Program.

4.2.2.2 Input Data and Procedures. The combined listing of the program and JCL cards is shown in Paragraph 6.6.2. The sort fields, in order of hierarchy, are:

<u>Field</u>	<u>Column</u>	<u>Description</u>
1	6-13	Serial Number



AD-A045 625

GENERAL DYNAMICS SAN DIEGO CALIF CONVAIR AEROSPACE DIV  
F-106 SCHEDULED MAINTENANCE STUDY. USER'S MANUAL, (U)  
SEP 72 G WANG, R S GROTE, J R COOPER

F/G 1/5

F41608-71-D-1383

UNCLASSIFIED

GDCA-AHD72-006

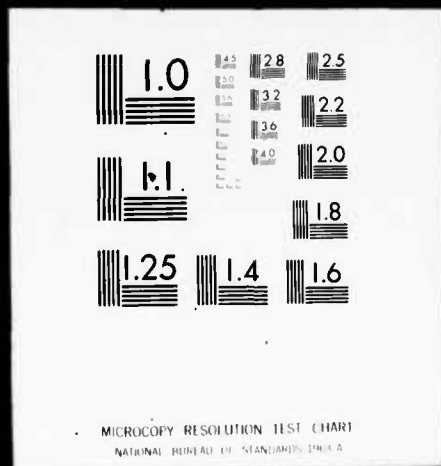
NL

2 of 6  
ADA045625



2 OF 6

ADA045625







#### 4.2.4 REFORMATTED DATA BANK SORT

**4.2.4.1 Purpose.** This IBM utility program sorts Data Bank data records into an ordered file for subsequent use on Tasks I, II, III, and V Statistical Programs.

4.2.4.2 Input Data and Procedures. The combined listing of the program and JCL cards is shown in Paragraph 6.6.4. The sort fields, in order of hierarchy, are:

<u>Field</u>	<u>Column</u>	<u>Description</u>
1	17-21	Work Unit Code
2	23-25	How-Malfunction Code
3	6-13	Serial Number
4	14-16	Week

The input tape record layout is shown in Figure 4-4. Record Types 3 and 4 are sorted.

**4.2.4.3 Output Description.** Sorting the Data Bank file of 587,255 data records on the IBM 370 took 27 minutes of elapsed time and 3 minutes of CPU time. A sample of the sorted output is shown in Figure 4-9.

1/4 1012 14.74.56 727143 9LX CNI 100 LENGTH 070 CONTRL 7.75 5000.000 01000000

PAGE 391

.....1.....2.....3.....4.....5.....6.....7.....8.....9.....0.....  
 CH 28351 Agk { 101 .....3

[illegible][illegible]

CM 2ROC, BLN 2, 10T 2.

**Figure 4-9. Sample Output — Data Bank Sort**

### 4.3 FREQUENCY ANALYSIS — TASK I

The objective of this task is to generate a matrix of data to determine the kinds of malfunctions that occur on a WUC and when they are discovered, and to compare these results with the definitions of scheduled inspections. A system of three COBOL programs has been developed to perform this task (Figure 4-10).

- a. Title Formatter and Five-Digit WUC Analysis (Paragraph 6.7.1).
- b. Frequency Analysis Sort (Paragraph 6.7.2).
- c. Three-Digit WUC Analysis (Paragraph 6.7.3).

Paragraph 6.7 contains the listing of the source programs with the corresponding job control cards, as noted above.

#### 4.3.1 TITLE FORMATTER AND FIVE-DIGIT WUC ANALYSIS

4.3.1.1 Purpose. The purpose of this program is to format the titles from the data for Support General (SG) WUC, perform the analysis at the five-digit WUC level, and to provide two output files to be used for the three-digit WUC analysis.

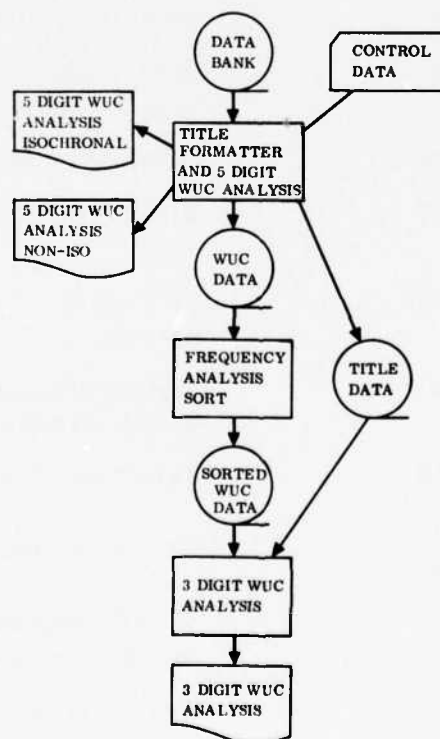


Figure 4-10. Logic Flow — Frequency Analysis

4.3.1.2 Input Data and Procedures. There are two types of input data: tape and card deck. Tape data consists of a data bank sorted in the order of Work Unit Code (WUC), How-Malfunction Code (HMC), aircraft serial number, and week number. The card deck data has the following format.

<u>Card</u>	<u>Column</u>	<u>Description</u>
a	3-5	Number of isochronal aircraft.
b	3-10	Isochronal aircraft serial number in ascending sequence.
	13-15	Starting week number for isochronal inspection.
c	1-5	When-Discovered Code (WDC) titles (WDC used must be in Column 5 and in ascending sequence).
d	1-3	Number of WDC corresponding to unscheduled inspections.
e	1-3	Sequential position of WDC corresponding to an unscheduled inspection.
f	1-3	Number of SG WUC to follow.
g	1-3	Sequential position of WDC corresponding to scheduled inspection.
	6-10	Scheduled inspection in ascending sequence.
h	1-80	Five cards with SG WUC titles (Columns 1-80).
i	1-25	Five cards with SG WUC titles (Columns 81-105).
j	1-3	Sequential position of WDC corresponding to two-digit SG WUC.
	6-10	Two-digit SG WUC.
k	1-3 4-6	{ WDC in sequence matching SG WUC.
l	1-5	SG WUC requiring time interval to define end of inspection.
	7-8	Week interval for SG WUC.

A sample input data deck is shown in Figure 4-11. The program generates four output files:

- a. Title Information.
- b. Five-digit WUC Analysis Report — Isochronal.
- c. Five-digit WUC Analysis Report — Non-isochronal.
- d. Five-digit WUC Analysis data.

The title information file is derived partially from the input card deck (Cards c, h, and i) and the data bank input file. The card deck defines the WDC and SG WUC titles. The Support General WUC Frequency is obtained from Type 3 records by totaling the number of maintenance action field for the appropriate SG-WUC.

The five-digit WUC Analysis Report-Isochronal file uses the Isochronal title to each page of the report; the frequencies for each WUC and HMC combination are obtained by accumulating the maintenance actions for each of the 21 WDCs for the Isochronal aircraft subset. The total unscheduled maintenance actions are accumulated, as are all totals over the complete WUC. The output is also written in the WUC-Data file for subsequent usage at the three-digit WUC level. A similar report file is available for Non-isochronal aircraft.

**4.3.1.3 Output Description.** The output consists of two report files that have 130 characters to a data record, blocked 15 to a tape record, and two data files that have 130 characters to a data record, blocked 23 to a tape record. A typical report output is shown in Figure 4-12.

The record layout for the two data files is shown in Figure 4-13, an example of the WUC Data in Figure 4-14, and Title Data in Figure 4-15. The WUC Data file contains:

<u>Column</u>	<u>Value</u>	<u>Description</u>
1	H	Flag indicating data relates to a specific HMC.
	W	Flag indicating data is a total for a WUC.
3-7		Five-digit WUC.
9-11	xxx	Three-digit HMC.
	BLANK	Total data for a WUC.
13-17		For Column 1 = H, sum of MA for WUC, HMC, WDC(1). For Column 1 = W, sum of MA for WUC + WDC(1).

This is repeated for 21 When-Discovered Codes.



## 80 COLUMN GENERAL PURPOSE FORM

JOB TITLE \_\_\_\_\_ ENGINEER \_\_\_\_\_  
 JOB NO. \_\_\_\_\_ ANALYST \_\_\_\_\_  
 PAGE 1 of 4  
 DATE \_\_\_\_\_

W-1	W-2	W-3	W-4	W-5	W-6	W-7	W-8
34							
57000236	331						
57000237	331						
57000243	324						
57000244	331						
57000255	331						
58000176	324						
58000901	331						
59000002	331						
59000003	331						
59000005	331						
59000006	331						
59000010	331						
59000012	331						
59000015	331						
59000018	331						
59000019	331						
59000026	331						
59000030	331						
59000054	324						
59000057	324						
59000058	324						
59000059	324						
59000104	331						
59000105	331						

## 80 COLUMN GENERAL PURPOSE FORM

JOB TITLE \_\_\_\_\_ ENGINEER \_\_\_\_\_  
 JOB NO. \_\_\_\_\_ ANALYST \_\_\_\_\_  
 PAGE 2 of 4  
 DATE \_\_\_\_\_

W-1	W-2	W-3	W-4	W-5	W-6	W-7	W-8
59000108	324						
59000110	324						
59000119	324						
59000141	324						
59000143	324						
59000144	324						
59000145	324						
59000147	324						
59000151	324						
59000152	324						
A							
B							
C							
D							
E							
F							
G							
H							
I							
J							
K							
L							
M							
N							
P							
Q							
R							

Figure 4-11. Sample Input — Title Formatter and Five-Digit WUC Analysis (Sheet 1 of 2)

**80 COLUMN GENERAL PURPOSE FORM**

PAGE **3** OF **4**

JOB TITLE \_\_\_\_\_ ENGINEER \_\_\_\_\_  
 JOB NO. \_\_\_\_\_ ANALYST \_\_\_\_\_ DATE \_\_\_\_\_

W-1	W-2	W-3	W-4	W-5	W-6	W-7	W-8
8							
T							
U							
V							
2							
4							
9							
1							
2							
3							
4							
5							
6							
15							
19							
20							
14							
9 03100							
7 03109							
8 03200							
8 03210							
10 03300							
17 03310							
17 03320							
17 03330							

**80 COLUMN GENERAL PURPOSE FORM**

PAGE **4** OF **4**

JOB TITLE \_\_\_\_\_ ENGINEER \_\_\_\_\_  
 JOB NO. \_\_\_\_\_ ANALYST \_\_\_\_\_ DATE \_\_\_\_\_

W-1	W-2	W-3	W-4	W-5	W-6	W-7	W-8
11 03600							
16 03600							
21 04141							
13 04210							
13 04210							
18 04610							
			0 0 0	0 0	0 0	0 0	0 0
			3 3 3	3 3	3 3	4 4	4 4
			1 2 2	1 3	4 1	2 2	2 2
			0 1 0	0 0	0 0	1 1	1 1
			9 0 0	0 0	0 0	9 0	9 0
0 0 0		0					
3 3 4		4					
3 3 6		1					
3 2 1		4					
0 0 0		1					
14 04XXX							
7 12							
03300 3							
03310 3							
03320 3							
03330 3							
03400 5							
03600 5							

Figure 4-11. Sample Input — Title Formatter and Five-Digit WUC Analysis (Sheet 2 of 2)

WUC = 11AL1		NON-ISU										PAGE 1															
WHEN DISC. CODE		A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z
SUPPORT GENERAL W.U.C.																											
SUPPORT GENERAL W.U.C. FREQUENCY																											
FREQ HMC = 020							1																			1	
FREQ HMC = 028							2																			4	
FREQ HMC = 070							20																			21	
FREQ HMC = 105							6																			6	
FREQ HMC = 109							2																			2	
FREQ HMC = 117							3																			3	
FREQ HMC = 127																											
FREQ HMC = 170																											
FREQ HMC = 190																											
FREQ HMC = 230																											
FREQ HMC = 446																											
FREQ HMC = 561																											
FREQ HMC = 574																											
FREQ HMC = 581																											
FREQ HMC = 625																											
FREQ HMC = 450							1																			1	
FREQ HMC = 501																											
FREQ HMC = 565																											
FREQ HMC = 750																											
FREQ HMC = 756																											
FREQ HMC = 780																											
FREQ HMC = 846																											
FREQ HMC = 910																											
FREQ HMC = 947																											
TOTL FREQUENCY							52																			57	

Figure 4-12. Sample Output — Five-Digit WUC Analysis

Column	Value	Description
118-123		For Col. 1 = H, sum of unscheduled MA for WUC and HMC.
		For Col. 1 = W, sum of unscheduled MA for WUC.
125	1	Isochronal Data.
	2	Non-isochronal data.
130		End of record.

On a recent IBM 370 run for an F-106 fleet of 150 aircraft and 2201 WUCs, total computer throughput time was 11 minutes. The following number of records were generated.

- Five-digit WUC Analysis — Isochronal 20,505 records
- Five-digit WUC Analysis — Non-isochronal 51,341 records
- Title Data 21 records
- WUC Data 30,614 records

The program has the following dimensional limitations.

- Isochronal aircraft 36 Maximum
- Number of Unscheduled WDC 10 Maximum
- Number of SG-WUC 14 Maximum
- Number of SG-WUC using time to determine end of inspection 10 Maximum

RECORDS AND WORK AREAS										SECTION													
TITLE FORMATTER AND 5 DIGIT WUC ANALYSIS - WUC DATA										SECTION													
RECORD NAME	FILE NO.	BLOCK	DATE	FILE NO.	BLOCK	DATE	FILE NO.	BLOCK	DATE	SECTION													
FIELD NAME	MA-1	MA-2	MA-3	MA-4	MA-5	MA-6	MA-7	MA-8	MA-9	MA-10	MA-11	MA-12	MA-13	MA-14	MA-15	MA-16	MA-17	MA-18	MA-19	MA-20	MA-21	MA-22	TOTAL UNICOD
CHARACTER POSITION	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
RECORD NAME	TITLE FORMATTER AND 5 DIGIT WUC ANALYSIS - TITLE DATA																						
FIELD NAME	TITLE DATA																						
CHARACTER POSITION																							
RECORD NAME	TITLE FORMATTER AND 5 DIGIT WUC ANALYSIS - TITLE DATA																						
FIELD NAME	TITLE DATA																						
CHARACTER POSITION																							
RECORD NAME	TITLE FORMATTER AND 5 DIGIT WUC ANALYSIS - TITLE DATA																						
FIELD NAME	TITLE DATA																						
CHARACTER POSITION																							
RECORD NAME	TITLE FORMATTER AND 5 DIGIT WUC ANALYSIS - TITLE DATA																						
FIELD NAME	TITLE DATA																						
CHARACTER POSITION																							

Figure 4-13. Record Layout - Title Formatter and Five-Digit WUC Analysis



#### 4.3.2 FREQUENCY ANALYSIS SORT

3.4.2.1 Purpose. The purpose of this program is to sort output WUC Data for further processing.

4.3.2.2 Input Data and Procedures. The input consists of the WUC Data file described in Paragraph 3.4.1.3.

4.3.2.3 Output Description. The output file, 130 characters to a data record, blocked 23 to a tape record, is sorted according to the following keys in ascending order.

<u>Key</u>	<u>Column</u>	<u>Description</u>
1	125	Isochronal
2	3-5	Three-digit WUC
3	1	Data Type
4	9-11	HMC

It required two minutes on the IBM 370 to sort the 30,636 records for the 150-aircraft F-106 fleet.

#### 4.3.3 THREE-DIGIT WUC ANALYSIS

4.3.3.1 Purpose. The purpose of this program is to perform the analysis at the three-digit WUC level.

4.3.3.2 Input Data and Procedures. Two previously generated files are input data to this program:

- a. Sorted WUC data.
- b. Title data.

Operation of the program is similar to analysis at the five-digit WUC level, Paragraph 4.3.1.2. Differences include a single report output, with the Isochronal preceding the Non-isochronal data.

4.3.3.3 Output Description. The output consists of a single report file, 130 characters to a data record, blocked 15 to a tape record. A typical output is shown in Figure 4-16. On a recent IBM 370 run for an F-106 fleet of 150 aircraft and 2201 WUCs, total computer throughput time was two minutes; 14,660 print records were generated.





#### 4.4.1 PREPROCESSOR -- TASK II

4.4.1.1 Purpose. The purpose of the Task II Preprocessor is to generate two output files for further processing using the sorted data bank tape, isochronal aircraft definition, a selected list of WUCs, and inspection criteria data as inputs as shown in Figure 4-17.

4.4.1.2 Input Data and Processors. There are two types of input data: tape and card deck. Tape data consists of a data bank sorted in the order of WUC, HMC, aircraft serial number, and week number. For the tape record layout, see Figure 4-4. The data card deck has the following formats.

##### Card No. 1:

<u>Column</u>	<u>Description</u>
1-5	WUC for Hourly Post Flight Inspection
6-10	WUC for MA-1 Scheduled Calibration
11-15	
16-20	
21-25	
26-30	WUC for IRAN Depot Visit
31-35	WUC for Preflight Inspection
36-40	WUC for Basic Postflight Inspection
41-45	WUC for Special Hourly Postflight
46-47	Minimum number of weeks between inspections for the four WUCs in Columns 1 through 20.
48-49	Minimum number of weeks between inspections for Periodic Inspection and IRAN Depot Visit

##### Card No. 2:

3-5	Number of Isochronal Aircraft. (Current program is dimensioned for a maximum of 36 isochronal aircraft, which may be increased by minor program modification.)
-----	--

The following cards describe the isochronal aircraft fleet, one card per isochronal aircraft; the serial numbers are sorted in ascending order.

<u>Column</u>	<u>Description</u>
3-10	Aircraft Serial Number
13-15	Starting Week Number for Isochronal Inspection



Figure 4-18 is a sample input data deck listing. The Task II Preprocessor program (Figure 4-17) produces two output files (2B and 2C) containing the following information.

<u>File</u>	<u>Data Type</u>	<u>Description</u>
2B	1	NORM Hours — Scheduled Inspection
2B	2	Manhours — Scheduled Inspection
2B	3	NORM Hours — Unscheduled Maintenance Actions
2B	4	NORS Hours — Unscheduled Maintenance Actions
2C	1	Manhours — Unscheduled Maintenance Actions

- a. NORM Hours and Manhours — Scheduled Inspection (for File 2B, Data Types 1 and 2). Any NOR time charged during preflights and basic postflights is recorded as unscheduled maintenance. Manhours expended during the look phase of these inspections, however, are charged as support general, so that these inspections are included when calculating the look phase manhour distributions. For a given type of scheduled inspection, each occurrence of that inspection on an aircraft provides an observation of the NORM hours charged during the look and repair phases of the inspection and the manhours charged during the look phase.

To calculate the NORM hours for the inspection, the first Type 3 record encountered with the support general (SG) WUC corresponding to that inspection is combined with records for immediately succeeding weeks with the same code until the end of a continuous block of weekly records is reached. The NORM hours sum for the inspection is obtained by accumulating the NORM hours recorded in this block of records. The manhours for the look phase of this inspection are obtained by also accumulating the manhours in the same way.

By analyzing the plots of flight hours versus week for the F-106 fleet (see Aircraft Inspection Histories, Paragraph 4.8), it was discovered that the minimum number of weeks between inspections was more than two weeks for Hourly Post Flight Inspections and MA-1 Scheduled Calibration Inspections. The minimum number of weeks between inspections for Periodic Inspections and IRAN Depot Visit Inspections was more than four weeks. This information was incorporated to define an inspection as part of the input data. (See Paragraph 4.4.1.2.)

- b. Manhours — Unscheduled Maintenance Action (for File 2C, Data Type 1). The manhour distributions are calculated separately for repair actions and unscheduled maintenance actions by accumulating the number of manhours charged against a specific WUC and specific HMC for successive weeks until a week is encountered with a nonzero number of maintenance actions. The number of repair actions or unscheduled actions against the same WUC is accumulated at the same time.

JOB TITLE	ENGINEER	PAGE	OF				
JOB NO.	APP	TWO-SHAFT	FUNCTION	ANALYST	DATE		
W-1	W-2	W-3	W-4	W-5	W-6	W-7	W-8
0330003310	0332003300	0340003600	0310003200	032100204			
36							
570000334	331						
570000237	331						
570000243	339						
570000244	331						
570000253	321						
580000774	339						
580000701	331						
590000002	331						
590000003	331						
590000005	331						
590000006	331						
590000010	331						
590000012	331						
590000015	331						
590000018	331						
590000019	331						
590000026	331						
590000030	331						
590000054	324						
590000057	324						
590000068	324						
590000059	334						
590000104	331						

[illegible]

4-23

This data is obtained from Record Type 4. The ratio of these totals provides one observation of manhours per maintenance action for this WUC malfunction. Each occurrence of a maintenance action on an aircraft is in the bank for the specific WUC malfunction. Each occurrence of a maintenance action on an aircraft in the bank for the specific WUC malfunction combination provides another observation.

- c. NORM and NORS Hours — Unscheduled Maintenance Actions (for File 2B, Data Types 3 and 4). The distribution for unscheduled NORM hours is the same as in Item b except that only unscheduled maintenance actions are included. Again, NORM hours and maintenance action totals are accumulated from week to week until a nonzero number of maintenance actions field is encountered. The ratio of the two totals then provides one observation of unscheduled NORM hours per maintenance action for the specific WUC. Since the type of malfunction is not recorded in AFM 65-110, through which NORM hours are recorded, it is not possible to calculate this distribution for a specific type of malfunction. The data for this calculation is obtained from Record Type 3.

Calculation of the NORS hours distribution is somewhat different. In this case, the parameter is NORS hours per week for a specific WUC. Each week for which NORS hours are charged against the specific WUC in Record Type 3 provides another observation.

4.4.1.3 Output Description. The output consists of two tape files (2B and 2C) with 20-character data records blocked 90 to a tape record, with the following formats.

<u>Column</u>	<u>Description</u>
1-5	Work Unit Code (WUC)
6-8	How-Malfunction Code (HMC)
10-15	Observation Data
17	Isochronal Indicator
	=1 Isochronal Inspection
	=2 Non-Isochronal Inspection
19	Data Type
	For File 2B:
	=1 Scheduled NORM Hours
	=2 Scheduled Manhours
	=3 Unscheduled NORM Hours
	=4 Unscheduled NORS Hours

<u>Column</u>	<u>Description</u>
	For File 2C:
	=1 Unscheduled Manhours
20	Record Mark

On a recent IBM 370 run for an F-106 fleet of 150 aircraft and 2201 WUCs, total computer throughput time was about 10 minutes. Records totaling 348,511 and 243,801 were generated for Files 2B and 2C, respectively.

#### 4.4.2 SORT FOR SCHEDULED NORM HOURS, MANHOURS, UNSCHEDULED NORM HOURS, NORS HOURS (SORT 2BS)

4.4.2.1 Purpose. The purpose of this program is to sort output File 2B for further processing.

4.4.2.2 Input Data and Procedures. The input consists of tape File 2B as described in Paragraph 4.4.1.3.

4.4.2.3 Output Description. An output tape with 20 characters per record and a blocking factor of 90, consisting of scheduled NORM hours, manhours, and unscheduled NORM and NORS hours records, is sorted according to the following keys in ascending order.

<u>Key</u>	<u>Column</u>	<u>Description</u>
1	17	Isochronal Indicator
2	19	Data Type
3	1-5	Work Unit Code

It took about four minutes on the IBM 370 to sort 348,511 records for the 150-aircraft F-106 fleet.

#### 4.4.3 CUMULATIVE DISTRIBUTION FOR SCHEDULED NORM HOURS, MANHOURS, UNSCHEDULED NORM HOURS, NORS HOURS

4.4.3.1 Purpose. This program generates cumulative distribution plots for scheduled NORM hours and manhours and for unscheduled NORM and NORS hours by WUC and isochronal subset type. The number of observations, maximum and minimum values, and the mean and variance of the observation are printed on the top of each plot.

**4.4.3.2 Input Data and Procedures.** The format for the input data card is:

<u>Column</u>	<u>Description</u>
1-5	Total Isochronal Aircraft Weeks. For definition, see Figure 2-1 in GDCA-AHD72-003, F-106 Scheduled Maintenance Study, Phase II — Model Formulation and Data Analysis.
6-10	Total Non-Isochronal Aircraft Weeks. For definition, see the preceeding reference.
13-14	Printout Suppression Cutoff for Isochronal Subset.
15-16	Printout Suppression Cutoff for Non-Isochronal Subset.

Figure 4-19 is a sample input data card.

[illegible]

**Figure 4-19. Sample Data – Cumulative Distribution for Scheduled NORM Hours, Manhours, Unscheduled NORM Hours, and NORS Hours**

4.4.3.3 Output Description. Cumulative distribution plots by a printer contain the following information.

Work Unit Code

Output Data — one of four types:

Scheduled NORM Hours

Scheduled Manhours

Unscheduled NORM Hours

Unscheduled NORS Hours

Isochronal or Non-Isochronal Subset

Number of Observations

Maximum and Minimum Values

Mean and Variation

The plot tape has 130-character data records, blocked 15 to a tape record. The values for printout suppression cutoff have a significant impact on the output volume. The effect of cutoff on output volume is shown below, based on the F-106 experience:

No. of Aircraft	Isochronal	Non-Isochronal	No. of Plots
15	0	10	1275
15	10	10	686
150	5	15	2101

It took six minutes on the IBM 370 to process 348,511 records and to generate the observation tape for the F-106 fleet. It required three printer hours to make 2101 plots. A sample output from a recent F-106 run is shown in Figure 4-20.

#### 4.4.4 SORT FOR UNSCHEDULED MANHOURS (SORT 2CS)

4.4.4.1 Purpose. The purpose of this program is to sort output File 2C for further processing.

4.4.4.2 Input Data and Procedures. The input consists of tape File 2C, as described in Paragraph 4.4.1.3.

4.4.4.3 Output Description. The output tape file, consisting of unscheduled manhours charged against a specific WUC and specific HMC is sorted according to the following keys in ascending order.

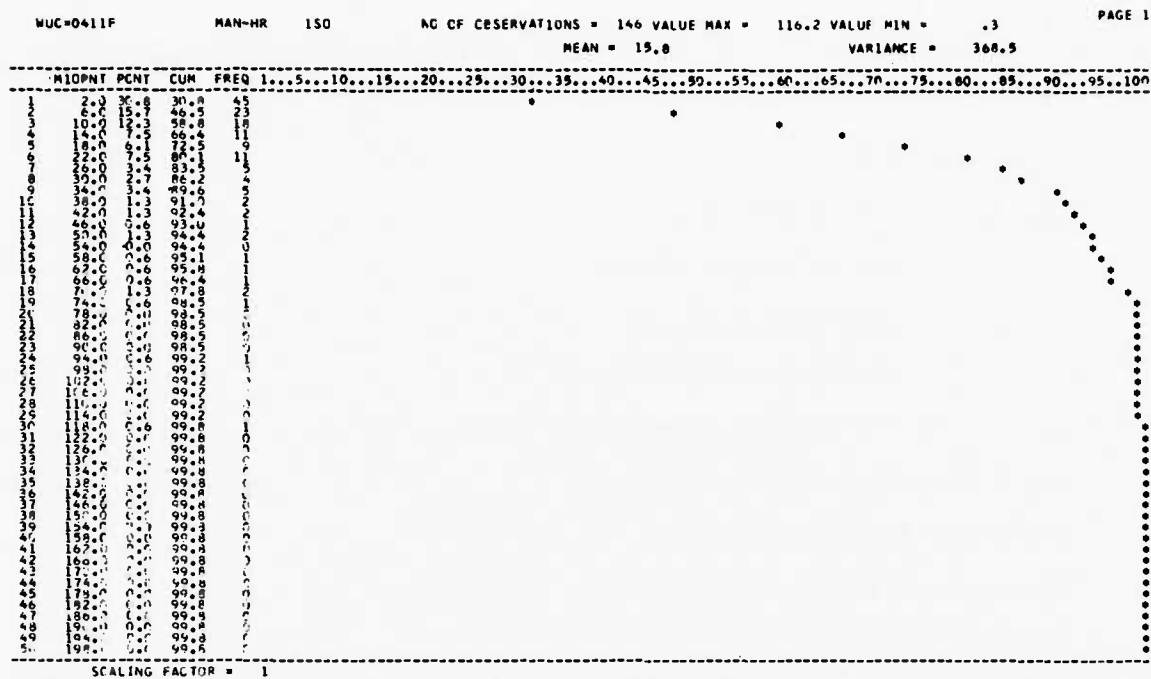


Figure 4-20. Sample Output — Cumulative Distribution of Scheduled Manhours

Key	Column	Description
1	17	Isochronal Indicator
		=1 Isochronal Subset
		=2 Non-Isochronal Subset
2	19	Data Type
		=1 Manhours
3	1-5	Work Unit Code (WUC)
4	6-8	How-Malfunction Code (HMC)

The output tape consists of 20-character data records, blocked 90 to a tape record. It took one minute and 36 seconds to sort 243,801 records for a fleet of 150 F-106 aircraft.

#### 4.4.5 CUMULATIVE DISTRIBUTION FOR UNSCHEDULED MANHOURS

**4.4.5.1 Purpose.** This program generates cumulative distribution plots for unscheduled manhours by WUC, HMC, and isochronal subset type. The number of observations, maximum and minimum values, and mean and variance of the observations are printed at the top of each plot.

**4.4.5.2 Input Data and Procedures.** The format for the data card is:

<u>Column</u>	<u>Description</u>
1-2	Printout suppression cutoff for isochronal subset
3-4	Printout suppression cutoff for non-isochronal subset

A sample data card is shown in Figure 4-21.

**4.4.5.3 Output Description.** Cumulative distribution plots by a printer contain:

- a. Work Unit Code (WUC).
- b. Output Data — Unscheduled Manhours.
- c. Isochronal or Non-Isochronal Subset.
- d. Number of Observations.
- e. Maximum and Minimum values.
- f. Mean and Variance.

[illegible]

**Figure 4-21. Sample Data — Cumulative Distribution for Unscheduled Manhours**



The plot tape consists of 130-character data records, blocked 15 to a tape record. The values for printout suppression cutoff have a significant impact on the output volume. The effect of cutoff on output volume is shown below, based on the F-106 experience.

No. of Aircraft	Isochronal	Non-Isochronal	No. of Plots
15	0	10	1433
150	0	10	7455
150	5	15	2819

The fleet of 150 F-106 aircraft required about 22 minutes on the IBM 370 to generate the observation tape and four hours of printer time to print the 2819 plots. A sample output from a recent F-106 run is shown in Figure 4-22.

#### 4.5 INTERVAL LENGTH ANALYSIS — TASK III

The objective of this task is to generate cumulative probability distributions for interval length analysis. A system of five COBOL programs has been developed to perform this task. (See Figure 4-23).

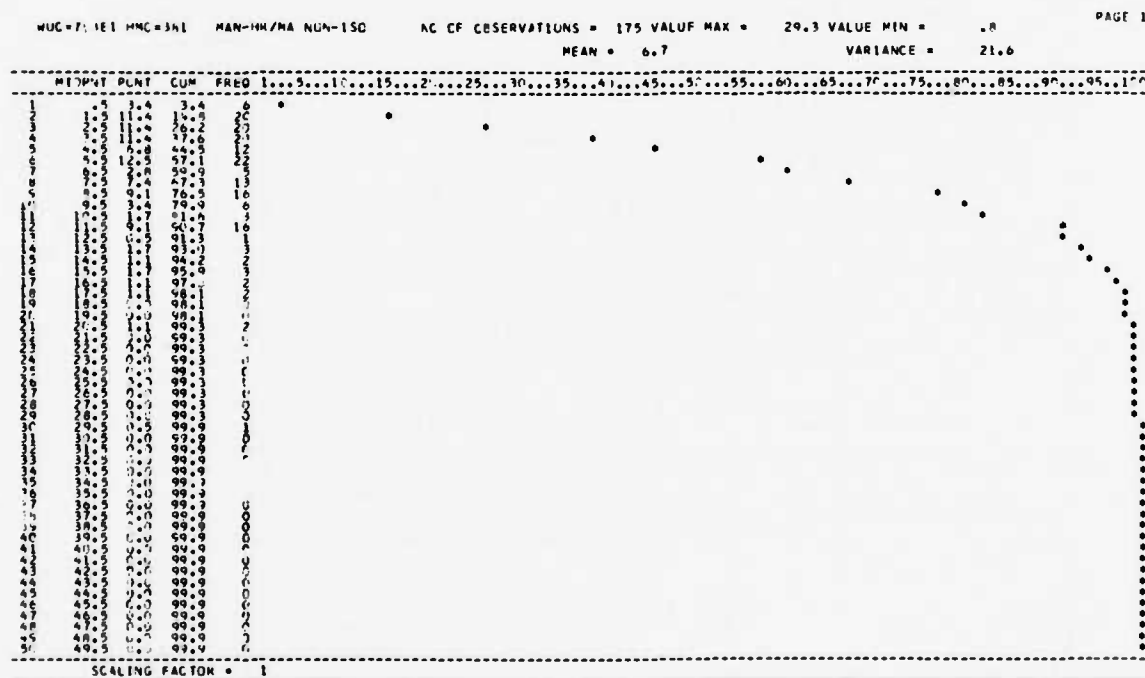


Figure 4-22. Sample Output — Cumulative Distribution for Unscheduled Manhours

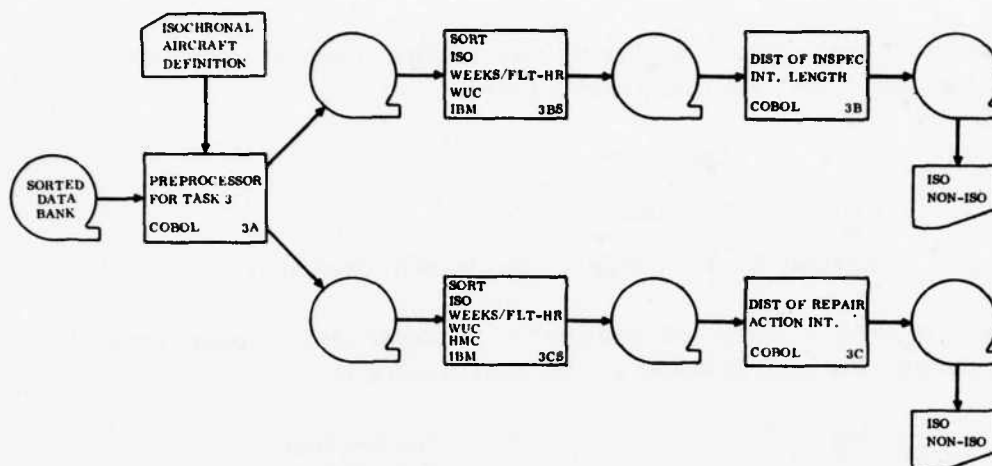


Figure 4-23. Logic Flow — Interval Length Analysis

- a. Task III Preprocessor.
- b. Sort 3BS.
- c. Cumulative Distribution 3B
- d. Sort 3CS.
- e. Cumulative Distribution 3C.

Paragraph 6.9 shows the listing of the source programs with corresponding job control cards.

#### 4.5.1 PREPROCESSOR — TASK III

4.5.1.1 Purpose. The purpose of the Task III Preprocessor is to generate two output files for further processing using the sorted data bank tape, isochronal aircraft definition, a selected list of WUCs, and inspection criteria data as inputs (Figure 4-23).

4.5.1.2 Input Data and Procedures. There are two types of input data: tape and card deck. Tape data consists of a data bank sorted in the order of WUC, HMC, aircraft serial number, and week number. For the tape record layout, see Figure 4-4. The data card deck has the following format.

<u>Column</u>	<u>Description</u>
<u>Card No. 1:</u>	
3-5	Number of Isochronal Aircraft. (Current program is dimensioned for a maximum of 36 isochronal aircraft, which may be increased by minor program modification.)

The following cards describe the isochronal aircraft fleet (one card per isochronal aircraft); serial numbers are sorted in ascending order.

<u>Column</u>	<u>Description</u>
3-10	Aircraft Serial Number
13-15	Starting Week Number for Isochronal Inspection

The next group of cards contains information for a special set of support general (SG) WUCs and relating time span in weeks for inspection criteria.

<u>Card</u>	<u>Column</u>	<u>Description</u>
1	1-5	WUC for Hourly Post Flight Inspection
	6-8	Minimum Number of Weeks Span Between Inspections for the WUC
2	1-5	WUC for MA-1 Scheduled Calibration
	6-8	Minimum Number of Weeks Span Between Inspections for the WUC
3	1-5	WUC for MA-1 Scheduled Calibration
	6-8	Minimum Number of Weeks Span Between Inspections for the WUC
4	1-5	WUC for MA-1 Scheduled Calibration
	6-8	Minimum Number of Weeks Span Between Inspections for the WUC
5	1-5	WUC for Periodic Inspection
	6-8	Minimum Number of Weeks Span Between Inspections for the WUC
6	1-5	WUC for IRAN Depot Visit
	6-8	Minimum Number of Weeks Span Between Inspections for the WUC

A sample input data deck is shown in Figure 4-24. The Task III Preprocessor program (Figure 4-23) produces two output files (3B and 3C) containing the following information.



<u>File</u>	<u>Date Type</u>	<u>Description</u>
3B	1	Inspection Interval in Weeks
3B	2	Inspection Interval in Flight Hours
3C	1	Repair Action Interval in Weeks
3C	2	Repair Action Interval in Flight Hours

- a. Inspection Interval Lengths (for File 3B, Data Types 1 and 2). Observation data will be generated for the interval between successive occurrences of two inspections of the same type. The inspections will be located in the data bank by checking for the appropriate SG WUCs in the Type 3 records. The inspection interval is defined to be the period between the end of one inspection and the start of the next. As for the repair action intervals below, the inspection intervals will be measured in both weeks and flight hours. The data bank will have only one Type 3 record for each inspection short enough to be performed in less than a week. However, long inspections will lead to a number of data bank records for consecutive weeks. Therefore, it will be necessary to determine the week numbers for both the start and the end of each inspection. This analysis will be performed for all inspection types.

By analyzing the plots of flight hours versus week for the F-106 fleet (see Aircraft Inspection Histories, Paragraph 4.8), it was discovered that the minimum number of weeks between inspections was three or more weeks for hourly Post Flight Inspections and MA-1 Scheduled Calibration Inspections. The minimum number of weeks between inspections for Periodic Inspections and IRAN Depot Visit Inspections was five or more weeks. This information was incorporated to define an inspection as part of the input data. (See Paragraph 4.5.1.2.)

- b. Repair Action Intervals (for File 3C, Data Types 1 and 2). This task involves the generation of observation data of the repair action interval for each combination of equipment identification WUC and HMC. Two types of observation data will be generated for each such combination: one for the interval measured in weeks and one for the interval measured in flight hours. Each observation will be the interval between two consecutive flight-hour totals found in the Type 4 records, in which the maintenance actions are recorded. It follows that whenever two or more maintenance actions are encountered for the same aircraft-week-WUC-HMC (i.e., in the same Type 4 record), one or more intervals of zero length will be included in both distributions. All distributions generated for this task will be stored on magnetic tape so that they will be available for use as input analyses to be performed at a later time.

4.5.1.3 Output Description. The output consists of two tape files (3B and 3C) and 20-character data records blocked 90 to a tape record, with the following formats.

<u>Column</u>	<u>Description</u>
1-5	Work Unit Code (WUC)
6-8	How-Malfunction Code (HMC)
10-15	Observation Data
17	Isochronal Indicator
	=1 Isochronal Inspection
	=2 Non-Isochronal Inspection
19	Data Type:
	For File 3B:
	=1 Inspection Interval Length in Weeks
	=2 Inspection Interval Length in Flight Hours
	For File 3C:
	=1 Repair Action Interval Length in Weeks
	=2 Repair Action Interval Length in Flight Hours
20	Record Mark

On a recent IBM 370 run for an F-106 fleet of 150 aircraft and 2201 WUCs, total computer throughput time was eight minutes. Records totaling 139,770 and 218,760 were generated for Files 3B and 3C, respectively.

#### 4.5.2 SORT FOR INSPECTION LENGTH INTERVAL (SORT 3B)

4.5.2.1 Purpose. The purpose of this program is to sort output File 3B for further processing.

4.5.2.2 Input Data and Procedures. The input consists of tape File 3B as described in Paragraph 4.5.1.3.

4.5.2.3 Output Description. The output tape file, 20-character data records blocked 90 to a tape record and consisting of inspection interval lengths in weeks and in flight hours, is sorted according to the following keys in ascending order.

<u>Key</u>	<u>Column</u>	<u>Description</u>
1	17	Isochronal Indicator
2	19	Data Type
3	1-5	Work Unit Code



4.5.3.3 Output Description. Cumulative distribution plots by a printer contain the following information.

- a. Work Unit Code (WUC).
- b. Output Data — One of the two types:
  - Inspection Interval Length in Weeks.
  - Inspection Interval Length in Flight Hours.
- c. Isochronal or Non-Isochronal Subset.
- d. Number of Observations.
- e. Maximum and Minimum Values.
- f. Mean and Variance.

The tape structure of the plot tape consists of 130-character data records, blocked 15 to a tape record. It took five minutes on the IBM 370 to process 139,770 records for the F-106 fleet and six minutes on the printer to make 176 plots. A sample output from a recent F-106 run is shown in Figure 4-26.

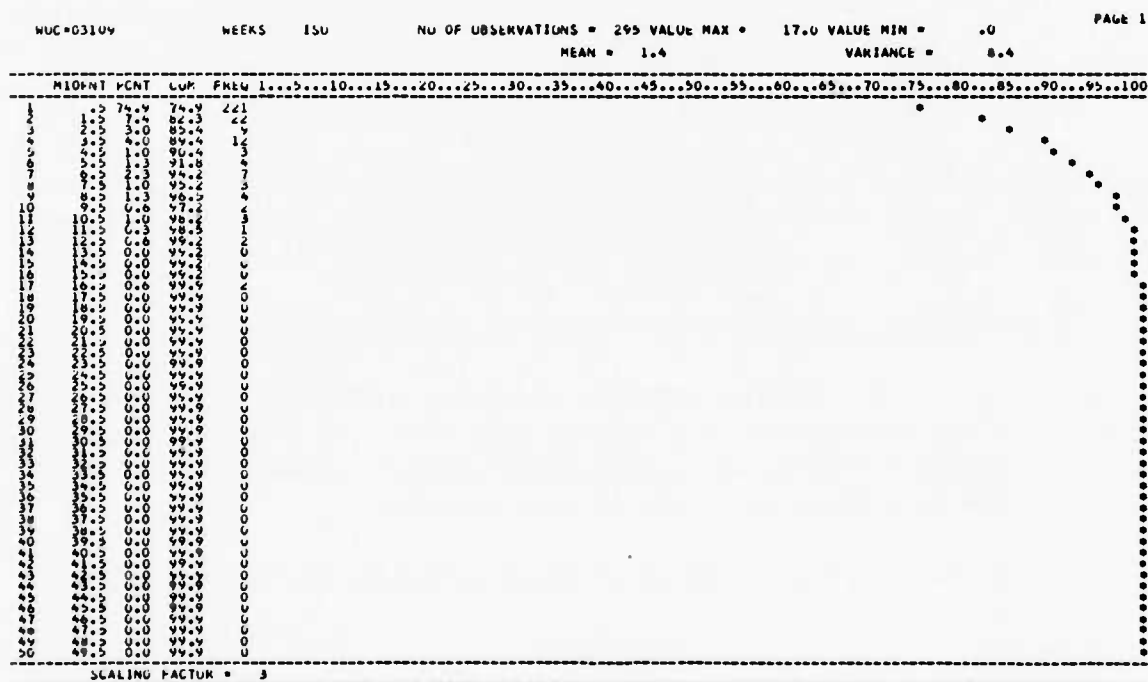


Figure 4-26. Sample Output — Cumulative Distribution for Inspection Length Interval



#### 4.5.4 SORT FOR REPAIR ACTION INTERVAL (SORT 3C)

4.5.4.1 Purpose. The purpose of this program is to sort output File 3C for further processing.

4.5.4.2 Input Data and Procedures. The input consists of tape File 3C, as described in Paragraph 4.5.1.3.

4.5.4.3 Output Description. The output tape file, consisting of repair action interval lengths in weeks and in flight hours charged against a specific WUC and specific HMC, is sorted according to the following keys in ascending order.

<u>Key</u>	<u>Column</u>	<u>Description</u>
1	17	Isochronal Indicator =1 Isochronal Subset =2 Non-Isochronal Subset
2	19	Data Type =1 Repair Action Interval in Weeks =2 Repair Action Interval in Flight Hours
3	1-5	Work Unit Code (WUC)
4	6-8	How-Malfunction Code (HMC)

The output tape file structure consists of 20-character data records, blocked 90 to a tape record. It took three minutes to sort 218,760 records for a fleet of 150 F-106 aircraft.

#### 4.5.5 CUMULATIVE DISTRIBUTION FOR REPAIR ACTION INTERVAL

4.5.5.1 Purpose. This program generates cumulative distribution plots for repair action intervals in weeks and in flight hours by WUC, HMC, and isochronal subset type. The number of observations, maximum and minimum values, and the mean and variance of the observations are printed on top of each plot.

4.4.5.2 Input Data and Procedures. The input data card has the following format.

<u>Column</u>	<u>Description</u>
1-5	Printout Suppression Cutoff for Non-Isochronal Subset
6-10	Printout Suppression Cutoff for Isochronal Subset

Figure 4-27 is a sample data card.

[illegible]

**4.5.5.3 Output Description.** Cumulative distribution plots by a printer contain the following information.

- The tape structure of the plot tape consists of 130-character data records, blocked 15 to a tape record. The values for printout suppression cutoff have a significant impact on the output volume. The effect of cutoff on output volume is shown on the following page, based on the F-106 experience.

No. of Aircraft	Isochronal	Non-Isochronal	No. of Plots
150	4	4	3426
150	4	10	2283

For a fleet of 150 F-106 aircraft, it required about 14 minutes on the IBM 370 to process 218,760 records and three printer hours to print 2284 plots. A sample output plot from a recent F-106 run is shown in Figure 4-28.

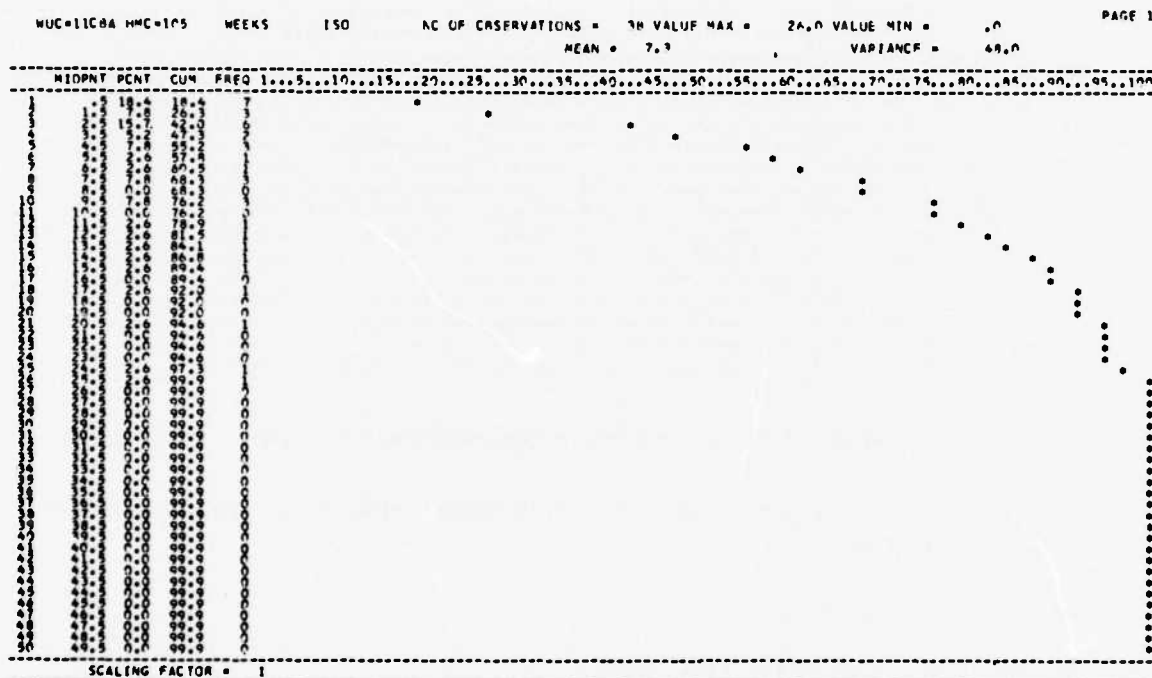


Figure 4-28. Sample Output - Cumulative Distribution for Repair Action Interval

#### 4.6 EFFECT OF TIME AFTER INSPECTION

This set of programs determines the effect of time after an inspection on maintenance requirements and effectiveness parameters. Independent variables will be used with a number of dependent variables for specified sets of equipment identification WUCs. A second analysis, to determine the trend of the various Data Bank variables and the effect of scheduled inspections on these trends, is also included.

The eight programs listed on the following page have been developed to perform these tasks. The logic flow at Aircraft and WUC levels are shown in Figures 4-29 and 4-30, respectively.

- a. Measure Observations at Aircraft Level.
- b. Measure Observations at WUC Level.
- c. Sort Aircraft-Level Observations.
- d. Sort WUC-Level Observations.
- e. Merge WUC-Level Observations.
- f. Count Observations.
- g. Analyze Regression and Correlation.
- h. Analyze Trend.

FORTTRAN-COBOL linkage is used for processing Items a, b, and g. COBOL input/output processing is employed to ensure data compatibility, provide more efficient input/output processing, and permit multi-reel file processing of the FORTRAN programs.

#### 4.6.1 MEASURE OBSERVATIONS AT AIRCRAFT LEVEL

4.6.1.1 Purpose. The purpose of this program is to generate the observations for a defined set of independent variables for a defined set of dependent variables for isochronal and non-isochronal aircraft subsets.

4.6.1.2 Input Data and Procedures. The program was written in both FORTRAN and COBOL. The latter provides the input/output capability and the FORTRAN section performs the requisite measurements. A listing of the complete program, the associated job control language (JCL), and a sample of input data is given in Paragraph 6.10.1. The COBOL input/output is used to handle multi-reel files.

Linkage is provided by a call in the FORTRAN program to a COBOL program entry. The entries in the COBOL program and their uses are.

CREAD1	Reads control cards, Type 1.
CREAD2	Reads control cards, Type 2.
CREAD3	Reads control cards, Type 3.
COBRD1	Reads data records from the Support General WUC file or the Non-support General WUC file, depending on the code transmitted by the FORTRAN program.

The input comprises:

- a. The Support General (SG) WUC file.
- b. The Non-support General (NSG) WUC file.
- c. Cards containing the control data.

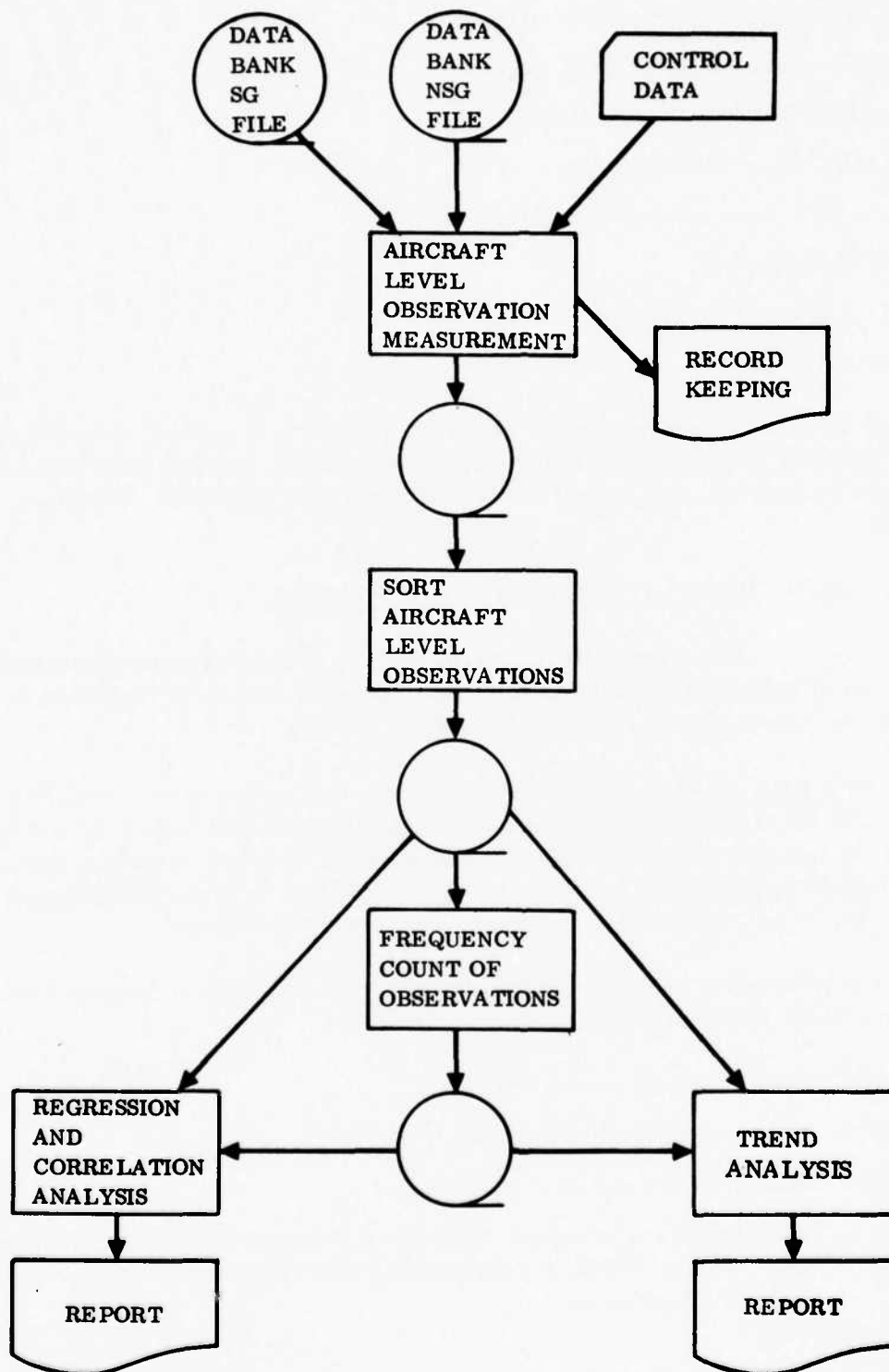


Figure 4-29. Logic Flow — Effect of Time After Inspection — Aircraft Level

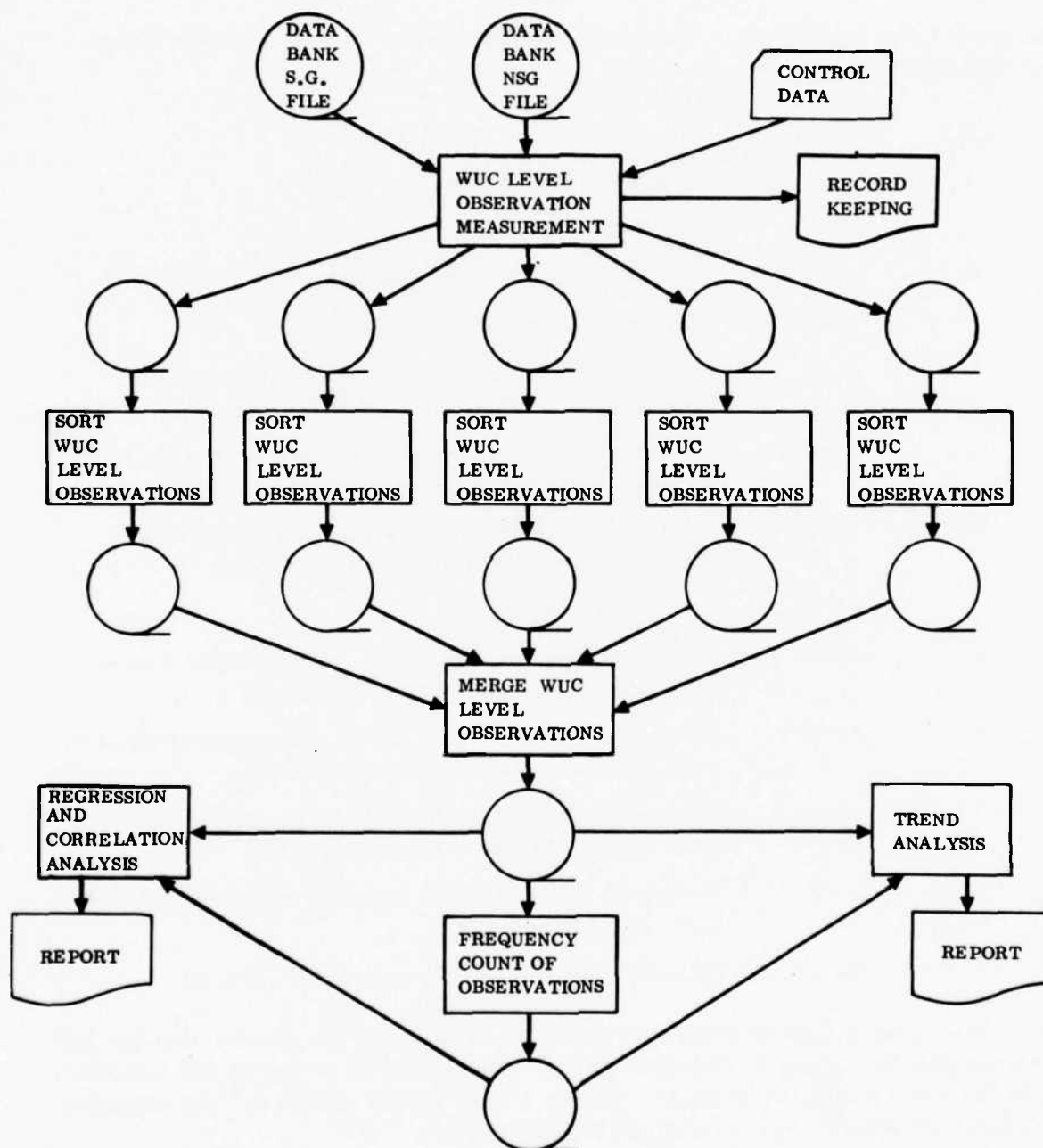


Figure 4-30. Logic Flow — Effect of Time After Inspection — WUC Level

The criterion to measure the end of an inspection is determined by the interval in weeks between occurrences of the inspection code. For Hourly Postflight and MAI inspections, the minimum interval to define the end of a current inspection is two weeks. For the Periodic inspection, the interval is increased to four weeks. The code corresponding to these inspections is the required input to the program, Cards 5 through 7.

The control data used in the F-106 Scheduled Maintenance Study is shown in Figure 4-31 and has the following format.

<u>Card</u>	<u>Column</u>	<u>Description</u>
1	3-10	First Week of Analysis
	13-20	Last Week of Analysis
2	3-10	First Serial Number for Analysis
	13-20	Last Serial Number for Analysis
3	3-10	Position in SG WUC table that follows the Periodic Inspection for measurement of NORM Hours
	13-20	Position in SG WUC table that follows the Hourly Post-flight Inspection for measurement of NORM Hours
4	3-10	Position in SG WUC table that follows the Periodic Inspection for measurement of AIE/Sortie
	13-20	Dummy (use zero)
5	32-36	First entry into SG WUC table, using greater than two week interval to define End of Inspection
6	32-36	Second entry into SG WUC table, using greater than two week interval to define End of Inspection
7	32-36	Third entry into SG WUC table, using greater than four week interval to define End of Inspection
8-On	3-10	Isochronal Aircraft Serial Number. (These must be in ascending sequence.)
	13-20	Starting Week Number for Isochronal Aircraft

The final card must have an eight-digit number in Columns 3-10, greater than the last serial number from Card 2, Columns 13-20. This is used as an end-of-file indicator. Cards 1-4 and 8 and on are examples of Type 1 input cards. Cards 5-7 are examples of Type 2, as defined by the COBOL-FORTRAN linkage.

PAGE **1** OF **2**

**ENGINEER**

DATE \_\_\_\_\_

JOE PAJ

Date \_\_\_\_\_

END MAP

## FUNCTION

ANALYST

DATE \_\_\_\_\_

W1	W2	W3	W4	W5	W6	W7	W8
100	500						
57000231	59000164						
3	0		03300				
			033				
			03400				
57000236	331						
57000237	331						
57000238	329						
57000239	331						
57002505	331						
58000776	329						
58000901	331						
59000002	331						
59000003	331						
59000005	331						
59000006	331						
59000010	331						
59000012	331						
59000015	331						
59000018	331						
59000019	331						
59000026	321						
59000030	331						

PAGE 2 OF 2

ENGINEER

DATE .

NON PRO

**DATA**

**(WQ) WAP**

### FUNCTION

ANALYST:

DATE .

W-1	W-2	W-3	W-4	W-5	W-6	W-7	W-8
59.0000054	32.4						
59.0000057	32.4						
59.0000058	32.4						
59.0000059	32.4						
59.000104	33.1						
59.000105	33.1						
59.000108	32.4						
59.000110	32.4						
59.000119	32.4						
59.000141	32.4						
59.000143	32.4						
59.000144	32.4						
59.000145	32.4						
59.000147	32.4						
59.000151	32.4						
59.000152	32.4						
99.000153	32.4						

4-45



The independent variables are the following measure of time after the inspection.

- a. Number of Weeks since Inspection. For each observation, this includes the week for which the values of the dependent variables are being determined, but not the week during which the inspection was completed.
- b. Number of Flight Hours Accumulated since Inspection. This includes all flight hours for the week of the observation, but none of the flight hours for the week during which the inspection was completed.
- c. Number of Sorties Flown since Inspection. This includes all sorties flown during the week of the observation, but none of those flown during the week in which the inspection was completed.
- d. Number of Landings Performed since Inspection. This includes all landings performed during the week of the observation, but none of those performed during the week in which the inspection was completed.

The dependent variables are:

- a. NORM Hours per Periodic Inspection. Separate observations are made for NORM hours per periodic inspection for periodic inspections immediately preceded by each of the following types of inspection.

1. Hourly Postflight.
2. MA1 Inspection.

An observation of time after each of these inspection types is performed with each of the four independent variables.

- b. NORM Hours per Hourly Postflight. Separate observations are made for NORM hours per hourly postflight inspection for hourly postflights preceded by each of the following types of inspection.

1. Periodic Inspection.
2. Hourly Postflight.
3. MA1 Inspection.

For each of these inspection types, an observation is taken with each of the four independent variables.

- c. Number of AIEs per Sortie. The number of AIEs per sortie is calculated for each aircraft week after the last preceding periodic inspection. All four of the independent variables are used.
- d. Number of Flight Hours per Week. The variable flight hours per week are defined to be the quotient obtained by dividing the number of hours flown since the latest periodic inspection by the number of weeks since that inspection.



<u>Column</u>	<u>Value</u>	<u>Description</u>
	05	Sortie/Week
	06	Landing/Week
15	1	Origins — Hourly Postflight
	2	Origins — MAs
	3	Origins — Periodic
16	1	Independent Variable — Week
	2	Independent Variable — Flight Hours
	3	Independent Variable — Sortie
	4	Independent Variable — Landing
18-23	XXXXXXX	Numerator of Dependent Variable
25-30	XXXXXXX	Denominator of Dependent Variable
32-37	XXXXXXX	Independent Variable
40	≠	End of Data Record

Output is achieved by a call from the FORTRAN program to the COBOL entry, COBOUT.

The record keeping output file contains a copy of the input control data and an additional line containing:

<u>Column</u>	<u>Description</u>
1-8	Number of Control Data Cards
9-16	Number of Output Observations
17-28	Number of Input Records from SG File
29-36	Number of Input Records from NSG File
37-44	Number of Type 1 Input Cards
45-52	Number of Type 2 Input Cards
53-61	Number of Type 3 Input Cards (always zero at Aircraft Level)

Figure 4-33 is a sample of the record keeping output. On a recent IBM 370 run for an F-106 fleet of 150 aircraft, a total of 55,288 observations were measured, requiring seven minutes of computer time.



three-digit code will include observations for all NSG-WUCs with the corresponding first three digits. The two-digit code group will include observations for all NSG-WUCs except those for the preceding three-digit codes. The three-digit code for a particular two-digit code subset must precede the two-digit code in the input control data.

The NSG-WUC set using the Hourly-Postflight, MA1, and Period inspections as origin for the F-106 Scheduled Maintenance Study is:

<u>Set</u>	<u>Description</u>	
2	74A	All of 74A
3	74B	All of 74B
4	74C	All of 74C
5	74D	All of 74D
6	74F	All of 74F
7	74H	All of 74H
8	74K	All of 74K
9	74L	All of 74L
10	74P	All of 74P
11	74Q	All of 74Q
12	74000	Only 74000

The NSG-WUC sets using the Hourly Postflight and Periodic inspection as origins are:

<u>Set</u>	<u>Description</u>	
1	11J	All of 11J
2	11K	All of 11K
3	11	All of 11 except for 11J, 11K
4	12B	All of 12B
5	12	All of 12 except for 12B
6	13C	All of 13C
7	13J	All of 13J
8	13	All of 13 except for 13C, 13J
9	14	All of 14
10	23K	All of 23K

<u>Set</u>	<u>Description</u>	
11	23M	All of 23M
12	23N	All of 23N
13	23Q	All of 23Q
14	23S	All of 23S
15	23	All of 23 except 23K, 23M, 23N, 23Q, 23S
16	41F	All of 41F
17	41	All of 41 except 41F
18	42E	All of 42E
19	42F	All of 42F
20	42G	All of 42G
21	42	All of 42 except for 42E, 42F, 42G
22	44	All of 44
23	45E	All of 45E
24	45J	All of 45J
25	45	All of 45 except for 45E, 45J
26	46A	All of 46A
27	46C	All of 46C
28	46G	All of 46G
29	46H	All of 46H
30	46J	All of 46J
31	46	All of 46 except 46A, 46C, 46G, 46H, 46J
32	47	All of 47
33	49A	All of 49A
34	49	All of 49 except 49A
35	51	All of 51
36	52	All of 52
37	55	All of 55
38	63	All of 63
39	65	All of 65

<u>Set</u>	<u>Description</u>	
40	71	All of 71
41	75	All of 75
42	93	All of 93
43	97	All of 97

The control card data used in the F-106 Maintenance Study shown in Figure 4-34 has the following format.

<u>Card</u>	<u>Column</u>	<u>Description</u>
1	3-10	First week of analysis
	13-20	Last week of analysis
2	3-10	First serial number for analysis
	13-20	Last serial number for analysis
3	3-10	Number of SG-WUC with week interval definition to define end of inspection
	13-20	Number of groups of non-SG-WUC
4	32-36	SG-WUC with greater than two-week interval for definition of end of inspection
5	32-36	SG-WUC with greater than two-week interval for definition of end of inspection
6	32-36	SG-WUC with greater than four-week interval for definition of end of inspection
7	8-10	Identification used on output for following group of NSG-WUC
	13-20	Starting index for WUC set number for the following group of NSG-WUC
8	3-10	Number of SG-WUC for origin used with following NSG-WUC dictionary
	13-20	Number of NSG-WUC in following dictionary
9	32-36	SG-WUC for origin with following NSG-WUC. (Number of cards set by Card B, Col. 1-10.)
10	32-36	NSG-WUC using above SG-WUC as origin. (Number of cards set by Card 8, Col. 11-20.)

**80 COLUMN GENERAL PURPOSE FORM**

JOB TITLE \_\_\_\_\_ ENGINEER \_\_\_\_\_ PAGE \_\_\_\_\_ OF \_\_\_\_\_  
 JOB NO. \_\_\_\_\_ AWO \_\_\_\_\_ TWO-WAY \_\_\_\_\_ FUNCTION \_\_\_\_\_ ANALYST \_\_\_\_\_ DATE \_\_\_\_\_

W-1	W-2	W-3	W-4	W-5	W-6	W-7	W-8
100	500						
570.00	590.00						
3	2						
			03300				
			033				
			03400				
1.1	2						
3	1.1						
			03300				
			033				
			03400				
			74A				
			74B				
			74C				
			74D				
			74F				
			74H				
			74K				
			74L				
			74P				
			74Q				
			74000				
1.0							
2	43						
			03300				

**80 COLUMN GENERAL PURPOSE FORM**

JOB TITLE \_\_\_\_\_ ENGINEER \_\_\_\_\_ PAGE \_\_\_\_\_ OF \_\_\_\_\_  
 JOB NO. \_\_\_\_\_ AWO \_\_\_\_\_ TWO-WAY \_\_\_\_\_ FUNCTION \_\_\_\_\_ ANALYST \_\_\_\_\_ DATE \_\_\_\_\_

W-1	W-2	W-3	W-4	W-5	W-6	W-7	W-8
			03400				
			115				
			11K				
			11				
			126				
			12				
			135				
			137				
			13				
			14				
			23K				
			23M				
			23N				
			23Q				
			23S				
			23				
			41.F				
			41				
			42E				
			42F				
			42G				
			43				
			44				
			45E				
			45J				

Figure 4-34. Sample Input — Measure Observations at WUC Level (Sheet 1 of 2)



# 80 COLUMN GENERAL PURPOSE FORM

JOB TITLE		ENGINEER		PAGE		OF	
JOB NO.	AWO	ENO MAP	FUNCTION	ANALYST	DATE		
W-1	W-2	W-3	W-4	W-5	W-6	W-7	W-8
00000000	11111111	22222222	33333333	44444444	55555555	66666666	77777777
11111111	22222222	33333333	44444444	55555555	66666666	77777777	88888888
			46				
			47				
			49A				
			49				
			51				
			62				
			55				
			63				
			65				
			71				
			75				
			93				
			97				
			ABCDEFVZ				
			KTM				
		3					
57000236	331						
57000237	331						
57000243	324						
57000244	721						
57002545	331						
58000776	324						
58000901	331						
59000002	721						
59000003	331						

# 80 COLUMN GENERAL PURPOSE FORM

JOB TITLE		ENGINEER		PAGE		OF	
JOB NO.	AWO	ENO MAP	FUNCTION	ANALYST	DATE		
W-1	W-2	W-3	W-4	W-5	W-6	W-7	W-8
00000000	11111111	22222222	33333333	44444444	55555555	66666666	77777777
11111111	22222222	33333333	44444444	55555555	66666666	77777777	88888888
59000005	321						
59000006	321						
59000010	321						
59000012	321						
59000015	321						
59000018	321						
59000019	321						
59000024	321						
59000030	321						
59000034	324						
59000037	324						
59000038	324						
59000039	324						
59000104	321						
59000105	321						
59000108	324						
59000110	724						
59000119	324						
59000141	324						
59000143	324						
59000144	324						
59000145	324						
59000147	324						
59000151	324						
59000152	324						

Figure 4-34. Sample Input — Measure Observations at WUC Level (Sheet 2 of 2)

<u>Card</u>	<u>Column</u>	<u>Description</u>
11	8-10	Identification used on output for following SG-WUC origins
	13-20	Starting index for the WUC set-number for the following group of NSG-WUC
12	3-10	Number of SG-WUC in following dictionary
	13-20	Number of NSG-WUC in following dictionary
13	32-36	SG-WUC for origins with following NSG-WUC (Number of cards set by Card 12, Col. 3-10)
14	32-36	NSG-WUC using above SG-WUC as origin (Number of cards set by Card 12, Col. 13-20)
15	41-49	Nine WDC used to define unscheduled maintenance
16	41-43	Three WDC used to define inspections
17	3-10	Position of first WDC, corresponding to Abort mission, in WDC table
	13-20	Position of second WDC, corresponding to Abort mission, in WDC table
18	3-10	Isochronal aircraft serial number. (These must be in ascending sequence)
	13-20	Starting week number for isochronal aircraft

The final card must have an eight-digit number in Columns 3-10 greater than the last serial number for Card 2, Columns 13-20. This is used as an end-of-file indicator.

Cards 1-3, 7-8, 11-12, and 17 and on are examples of Type 1 input cards; 4-6, 9-10, and 13-14 are examples of Type 2; and 15-16 are examples of Type 3 (as defined by the COBOL-FORTRAN Linkage).

Data for the various sets of WUCs is analyzed with measurements taken using the following independent and dependent variables. The independent variables are:

- a. Number of Weeks since Inspection. For each observation, this includes the week for which the values of the dependent variables are being determined, but not the week during which the inspection was completed.
- b. Number of Flight Hours Accumulated since Inspection. This includes all flight hours for the week of the observation, but none of the flight hours for the week during which the inspection was completed.

- c. Number of Sorties Flown since Inspection. This includes all sorties flown during the week of the observation, but none of those flown during the week in which the inspection was completed.
- d. Number of Landings Performed since Inspection. This includes all landings performed during the week of the observation, but none of those performed for the week during which the inspection was completed.

Not all dependent variables are measured against each independent variable. The dependent variables measured are:

- a. Unscheduled Maintenance Actions per Week.
- b. Unshceduled Maintenance Actions per Flight Hour.
- c. Unscheduled Maintenance Actions per Sortie.
- d. Unscheduled Maintenance Actions per Landing.

Variables a through d are defined to be the quotients obtained by dividing the number of unscheduled maintenance actions since an inspection by the number of weeks, flight hours, sorties, and landings since the inspection. These are observed as functions of independent variables a through d. A separate observation of each variable is performed for each of the inspection types associated with the WUC set. In each observation, a value of each variable is calculated for each week up to the next occurrence of an inspection of any of these types.

- e. The Number of Repair Actions (fix phase maintenance actions) per Inspection by Inspection type. This observation is calculated somewhat differently than the other dependent variables. For a given number of weeks after a given type of inspection, each aircraft provides a number of observations of whether or not a second type of inspection occurs in the given week. Each aircraft also provides a number of observations of the number of repair actions in the given week that result from the second type of inspection, as identified by the When-Discovered Code. The number of repair actions per inspection for this inspection type is then the total number of these repair actions on all aircraft divided by the total number of inspections of this type on all aircraft. The inspection types for which this variable is calculated are those for which When-Discovered Codes correspond to an inspection. Each observation includes all four independent variables, measured from the latest occurrence of an inspection of one of the specified types. A separate analysis is performed for each combination of When-Discovered Code and type of inspection used as a time origin.
- f. Abort Maintenance Actions per Sortie. An abort maintenance action is defined in the input on Card 17. The ratio of the number of these actions for an aircraft-week to the number of sorties in that week constitutes an observation of this dependent variable. This observation is analyzed with all four independent variables, which are to be measured from the latest occurrence of an inspection of one of the specified types. Separate observations are performed on data for the different inspection types.

The program is suitable for data from all USAF aircraft with the following dimensional limitations.

- a. Total number of WUC sets                      200 maximum
- b. Number of WUC groups                        7 maximum
- c. Number of WDCs                                9 maximum
- d. Number of WDCs (Inspection)                3 maximum

4.6.2.3 Output Description. The output consists of a magnetic tape with 40 characters to a data record, blocked 70 to a tape record. A sample is shown in Figure 4-35; the format of the data record is:

<u>Column</u>	<u>Value</u>	<u>Description</u>
3-7		Group ID of Origin (defined by input data)
8-10	XXX	WUC Set Number (defined by input data)
11	0	For Columns 13-14 = 07, 08, 09, 10, 20
	1	Current Inspection HPF
	2	Current Inspection MAs
	3	Current Inspection Periodic
12	1	Non-Isochronal Aircraft
	2	Isochronal Aircraft
13-14	07	Unscheduled MA/Week
	08	Unscheduled MA/Flight Hour
	09	Unscheduled MA/Sortie
	10	Unscheduled MA/Landing
	18	Repair Action/Inspection
	20	Abort MA/Sortie
15	1	Origins — Hourly Postflight
	2	Origins — MAs
	3	Origins — Periodic
16	1	Independent Variable — Week
	2	Independent Variable — Flight Hour



The record-keeping output file contains a copy of the input control data and an additional line containing:

<u>Column</u>	<u>Description</u>
1-8	Number of control data cards
9-16	Number of output observations
17-28	Number of input records from SG file
29-36	Number of input records from NSG file
37-44	Number of Type 1 input cards
45-52	Number of Type 2 input cards
53-61	Number of Type 3 input cards

A sample of the record keeping output is shown in Figure 4-36. On a recent IBM 370 run for an F-106 fleet of 150 aircraft, a total of 3,902,190 observations were measured, requiring 25 minutes of computer time and five reels of magnetic tape for output.

#### 4.6.3 SORT AIRCRAFT-LEVEL OBSERVATIONS

4.6.3.1 Purpose. This IBM utility program sorts the aircraft-level observation tape records into an ordered file for subsequent use by the:

- a. Observation Count program.
- b. Regression and Correlation Analysis program.
- c. Trend Analysis program.

The logic flow for this Sort is shown in Figure 4-29.

4.6.3.2 Input Data and Procedures. The combined listing of the program and JCL cards is shown in Paragraph 6.10.3. The sort fields in order of hierarchy are:

<u>Field</u>	<u>Column</u>	<u>Description</u>
1	3-16	See description in Paragraph 4.6.1.3
2	32-37	Independent Variable

The sort input tape record is described in Paragraph 4.6.1.3, and a sample is shown in Figure 4-32.



4.6.3.3 Output Description. Sorting 55,288 records of the Aircraft-Level Observations file for an F-106 fleet of 150 aircraft took three minutes on the IBM 370.

#### 4.6.4 WUC-LEVEL OBSERVATIONS

4.6.4.1 Purpose. This IBM utility program sorts the WUC-level observation tape records into an ordered file for subsequent use by the Merge WUC-Level Observations program. Separate sorts were performed to prevent exceeding the sort capacity and to provide more efficient processing. The logic flow for this sort and the subsequent merge is shown in Figure 4-30.

4.6.4.2 Input Data and Procedures. The combined listing of the program and JCL cards is shown in Paragraph 6.10.4. The sort fields in order of hierarchy are:

<u>Field</u>	<u>Column</u>	<u>Description</u>
1	3-16	See description in Paragraph 4.6.2.3
2	32-37	Independent Variable

4.6.4.3 Output Description. Sorting approximately 800,000 records of the WUC-Level Observations file for an F-106 fleet of 150 aircraft took 20 minutes on the IBM 370. Five sort input tapes generated seven sort output tapes, which were subsequently merged.

#### 4.6.5 MERGE WUC-LEVEL OBSERVATIONS

4.6.5.1 Purpose. This IBM utility program merges the sorted WUC-level observation tape records into an ordered multi-reel file for subsequent use by the:

- a. Observations Count program.
- b. Regression and Correlation Analysis program.
- c. Trend Analysis program.

4.6.5.2 Input Data and Procedures. The combined listing of the program and JCL cards is shown in Paragraph 6.10.5. The merge fields and tape record description are the same as described in Paragraph 4.6.4.2.

4.6.5.3 Output Description. Merging 3,902,190 records of the sorted WUC-Level Observations file for an F-106 fleet of 150 aircraft took 29 minutes on the IBM 370. Seven sort input tapes generated a merged output file of five tapes.



#### 4.6.6 OBSERVATIONS COUNT

4.6.6.1 Purpose. This COBOL program counts the number of observations in each of two files:

- a. Aircraft-Level sorted file.
- b. WUC-Level Observations merged file.

As shown in Figures 4-29 and 4-30, the respective outputs are input to the corresponding aircraft-level and WUC-level Regression and Correlation and Trend Analysis programs.

4.6.6.2 Input Data and Procedures. The combined listing of the program and JCL cards is shown in Paragraph 6.10.6. The respective input records for aircraft and WUC levels are described in Paragraphs 4.6.1.3 and 4.6.2.3.

4.6.6.3 Output Description. The output tape records consist of 30-character data records blocked 90 data records to a tape record. The output data record description is:

<u>Field</u>	<u>Column</u>	<u>Description</u>
1	3-16	See column breakdown in Paragraphs 4.6.1.3 and 4.6.2.3, respectively, for aircraft and WUC levels.
2	17-22	Count of Observations.
3	24-29	Count of Observations for Equal Values in Columns 3-10. (For record-keeping purposes, not used by subsequent programs.)

Figure 4-37 shows a sample tape output record for the Aircraft-Level Observations Count. Processing for an F-106 fleet of 150 aircraft on the IBM 370 resulted in the following input/output statistics.

- a. Aircraft Level. 55,288 input records and 54 output records required three minutes of processing time.
- b. WUC Level. 3,902,190 input records and 4342 output records required 23 minutes of processing time.



CORRELATION, REGRESSION STATISTICS

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00101001010711 CC= -.04244 A= .07600 B= -.00327 SER= .00128 SEE= .28005 .27980 F= 6.97283
XBAR= 3.76614 XSIGMA= 3.53431 YBAR= .05812 YSIGMA= .12278 N= 3857
00101001010731 CC= -.00236 A= .02467 B= -.00005 SER= .00065 SEE= .12278 .12278 F= .00639
XBAR= 7.67518 XSIGMA= 6.06013 YBAR= .02447 YSIGMA= .05597 N= 979
00101001010812 CC= -.06437 A= .02322 B= -.00036 SER= .00010 SEE= .10744 .10744 F= 15.02769
XBAR= 19.54904 XSIGMA= 18.45240 YBAR= .01601 YSIGMA= .05597 N= 3614
00101001010832 CC= -.03665 A= .00966 B= -.00006 SER= .00005 SEE= .05597 .05597 F= 1.28503
XBAR= 33.46218 XSIGMA= 33.67157 YBAR= .00782 YSIGMA= .14388 N= 947
00101001010913 CC= -.05997 A= .03299 B= -.00063 SER= .00023 SEE= .14414 .14414 F= 13.03841
XBAR= 11.39900 XSIGMA= 10.42252 YBAR= .02354 YSIGMA= .07567 N= 3614
00101001010933 CC= -.02631 A= .01366 B= -.00011 SER= .00013 SEE= .07567 .07567 F= .66464
XBAR= 19.63368 XSIGMA= 19.53676 YBAR= .01178 YSIGMA= .18219 N= 947
00101001011014 CC= -.05788 A= .03612 B= -.00096 SER= .00028 SEE= .18219 .18219 F= 12.13960
XBAR= 11.61953 XSIGMA= 10.79339 YBAR= .02477 YSIGMA= .07567 N= 3614
00101001011034 CC= -.02538 A= .01366 B= -.00011 SER= .00012 SEE= .07567 .07567 F= .76187
XBAR= 20.00250 XSIGMA= 20.34906 YBAR= .01177 YSIGMA= .01694 N= 947
00101001012011 CC= .00714 A= -.00053 B= .00035 SER= .00004 SEE= .01694 .01694 F= 13.84725
XBAR= 3.33044 XSIGMA= 3.23566 YBAR= .00068 YSIGMA= .01532 N= 3055
00101001012012 CC= .06241 A= .00046 B= .00006 SER= .00002 SEE= .01532 .01532 F= 13.32035
XBAR= 18.49876 XSIGMA= 17.72144 YBAR= .00060 YSIGMA= .01294 N= 3055
00101001012013 CC= .00999 A= .00038 B= .00008 SER= .00004 SEE= .01294 .01294 F= 10.69848
XBAR= 10.81898 XSIGMA= 9.98664 YBAR= .00045 YSIGMA= .01957 N= 3055
00101001012014 CC= .07720 A= .00071 B= .00013 SER= .00003 SEE= .01957 .01957 F= 18.30397
XBAR= 11.01637 XSIGMA= 10.29906 YBAR= .00091 YSIGMA= .00000 N= 3055
00101001012031 CC= .00600 A= .00600 B= .00000 SER= .00000 SEE= .00000 .00000 F= .00000
XBAR= 7.98782 XSIGMA= 0.00000 YBAR= .00000 YSIGMA= .00000 N= 657
00101001012032 CC= .00000 A= .00000 B= .00000 SER= .00000 SEE= .00000 .00000 F= .00000
XBAR= 37.32019 XSIGMA= 0.00000 YBAR= .00000 YSIGMA= .00000 N= 657
00101001012033 CC= .00000 A= .00000 B= .00000 SER= .00000 SEE= .00000 .00000 F= .00000
XBAR= 1.94215 XSIGMA= 0.00000 YBAR= .00000 YSIGMA= .00000 N= 657
00101001012034 CC= .00000 A= .00000 B= .00000 SER= .00000 SEE= .00000 .00000 F= .00000
XBAR= 22.30530 XSIGMA= 0.00000 YBAR= .00000 YSIGMA= .00000 N= 657
001010010120711 CC= .08301 A= .01224 B= .00378 SER= .00310 SEE= .12863 .12819 F= 1.48472
XBAR= 2.26652 XSIGMA= 0.82547 YBAR= .01489 YSIGMA= .02291 N= 216
00101001020731 CC= .26294 A= .00323 B= .00169 SER= .00076 SEE= .02209 .02209 F= 4.89303
XBAR= 4.79104 XSIGMA= 3.56251 YBAR= .00488 YSIGMA= .01762 N= 67
00101001020812 CC= .16380 A= .00132 B= .00023 SER= .00009 SEE= .01752 .01752 F= 6.85321
XBAR= 10.61204 XSIGMA= 14.28754 YBAR= .00234 YSIGMA= .00716 N= 198
00101001020832 CC= .10416 A= .00062 B= .00004 SER= .00005 SEE= .00720 .00716 F= .63345
XBAR= 21.62994 XSIGMA= 0.43059 YBAR= .00161 YSIGMA= .00720 N= 60

```

Figure 4-38. Sample Output — Correlation and Regression Analysis

<u>Output Title</u>	<u>Description</u>
CC	Correlation Coefficient
A	Intercept for Independent Variable
B	Slope of Independent Variable
SER	Standard Regression Coefficient
SEE	Standard Error Estimate
F	F-level for Regression
XBAR	Mean of Independent Variable
XSIGMA	Standard Deviation of Independent Variable
YBAR	Mean of Observation
YSIGMA	Standard Deviation of Observation
N	Number of Observations

The output report tape records consist of 130-character data records blocked 15 data records to a tape record. Output is provided by a call from the FORTRAN program to a COBOL entry, COBOT2.

A fleet of 150 F-106 aircraft required one minute of computer time to process 55,288 records in 54 groups at the Aircraft Level. At the WUC Level, it required 25 minutes of computer time to process 3,902,190 records in 4342 groups.

#### 4.6.8 TREND ANALYSIS

4.6.8.1 Purpose. The purpose of this program is to determine the trend of various data bank variables and the effect of scheduled inspections on these trends. The analysis is performed at the aircraft and WUC levels using the same program.

4.6.8.2 Input Data and Procedures. A listing of the program (written in COBOL), the JCL for use on the IBM 370, and a sample of input data is shown in Paragraph 6.10.8. The input data consists of three files:

- |                                      |   |                                  |
|--------------------------------------|---|----------------------------------|
| a. Sorted observations.              | } | For either WUC or Aircraft Level |
| b. Frequency count of observations.  |   |                                  |
| c. Cutoff and dependent axis titles. |   |                                  |

The generation of Files a and b has been covered previously. The data cards to create the third file have the following format.

<u>Card</u>	<u>Column</u>	<u>Description</u>
a	1-5	Printout Suppression Cutoff
b	1-80	Title used dependent axis, one card per title

A sample input, that used in the F-106 Scheduled Maintenance Study, is given in Figure 4-39.

The program is suitable for data from any USAF aircraft, with the following program dimension limitations.

Number of Dependent Titles	15 maximum
Number of Independent Intervals	200 maximum

The independent titles and the decoding for the dependent titles written into the program are compatible with the variables and codes generated in the measurement programs at both Aircraft and WUC Levels.

4.6.8.3 Output Description. The output is a plot for each group of input identifiers (Columns 3 through 16 of the input data) of the dependent versus independent variables. The structure of the plot tape consists of 130-character data records, blocked 15 to a tape record.

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JOB TITLE		JOB NO.		JOB MAP		FUNCTION		ANALYST		PAGE		OF	
U-1	U-2	U-3	U-4	U-5	U-6	U-7	U-8	U-9	U-10	U-11	U-12	U-13	U-14
S													
NORM HOURS / PERIODIC													
NORM HOURS / MONTHLY POSTLIGHT													
RTT / SORTIE													
FH / WEEK													
SORTIE / WEEK													
LANDING / WEEK													
UNSCHEDULED MA / WEEK													
UNSCHEDULED MA / FLIGHT HOUR													
UNSCHEDULED MA / SORTIE													
UNSCHEDULED MA / LANDING													
UNSCHEDULED MA / INSPECTION													
REPAIR ACTION / INSPECTION													
ABORT MA / SORTIE													

Figure 4-39. Sample Input — Trend Analysis

At the WUC Level, the values for printout suppression have a significant impact on output volume. The effect of cutoff on output volume is shown below, based on the F-106 experience for 150 aircraft.

Cutoff Values	Number of Plots at WUC Level
0	3680
5	2059

A fleet of 150 F-106 aircraft required three minutes to process 55,300 records and ten minutes to print the 54 plots at the Aircraft Level. At the WUC Level, it required 30 minutes to process 3,902,190 records and three hours to print the 2059 plots. A sample output from a recent F-106 run is shown in Figure 4-40.

#### 4.7 REMOVAL ACTION ANALYSIS — TASK V

The objective of this task is to generate the cumulative distribution for the interval between removals on each WUC and to rank the codes in order of their frequencies of removal. A system of nine COBOL programs has been developed to perform this task. (See Figure 4-41 and the following page.)

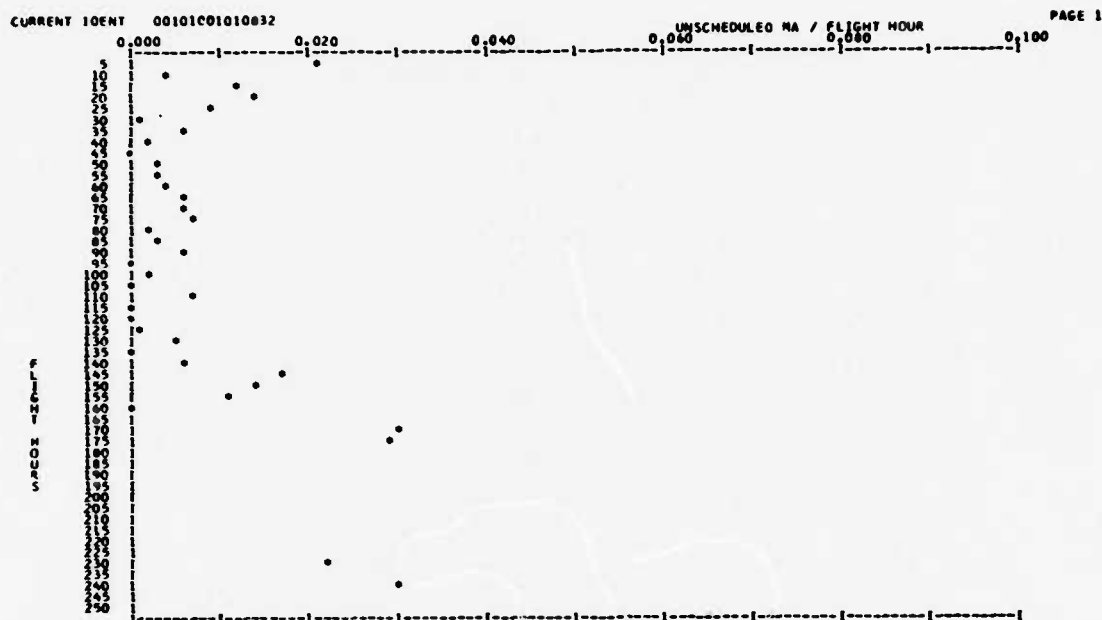


Figure 4-40. Sample Output — Trend Analysis

- a. Task V Preprocessor.
- b. Sort WUC Frequency.
- c. Write WUC Frequency.
- d. Sort Non-isochronal Frequency.
- e. Write Non-isochronal Frequency.
- f. Sort Isochronal Frequency.
- g. Write Isochronal Frequency.
- h. Sort Removal Intervals.
- i. Cumulative Distribution of Removal Intervals

Paragraph 6.11 contains the listing of the source programs and the corresponding job control cards.

#### 4.7.1 TASK V PREPROCESSOR

4.7.1.1 Purpose. The purpose of the Task V Preprocessor is to generate two output files for further processing, using the sorted data bank and the isochronal aircraft definition as input data.

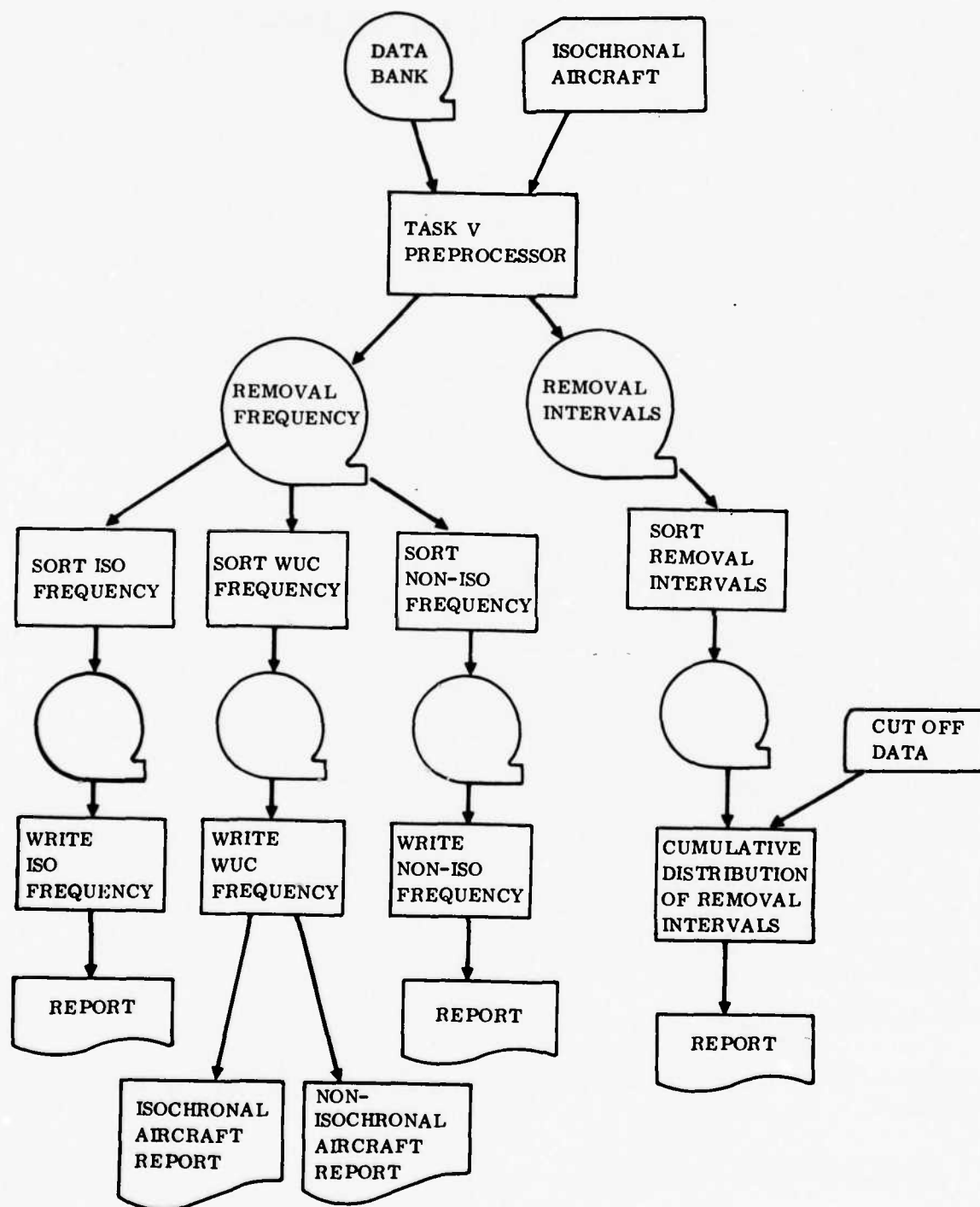


Figure 4-41. Logic Flow — Removal Action Analysis

4.7.1.2 Input Data and Procedures. There are two types of input data: tape and card deck. Tape data consists of a data bank sorted in the order of WUC, HMC, aircraft serial number, and week number. The tape record layout is shown in Figure 4-4. The data card deck has the following format.

<u>Card</u>	<u>Column</u>	<u>Description</u>
a	3-5	Number of isochronal aircraft.
b	3-10	Isochronal aircraft serial number (number of cards set by Card a).

A sample input data deck is shown in Figure 4-42.

The Removal Frequency file is generated by accumulating the maintenance actions (Type 3 record, Columns 44 through 46) for each WUC for the two aircraft subsets. The removal action intervals are measured between occurrences of removals of each WUC in terms of the number of weeks and the number of flight hours.

4.7.1.3 Output Description. The output consists of two tape files, both 20 characters to a data record and blocked 90 to a tape record. The format of the Removal Frequency file is:

<u>Column</u>	<u>Description</u>
1-5	Work Unit Code (WUC)
6-10	Isochronal Frequency
11-15	Non-isochronal Frequency
20	Record Mark

A sample output is shown in Figure 4-43.

The format of the Removal Intervals file is:

<u>Column</u>	<u>Description</u>
1-5	Work Unit Code (WUC)
10-15	Observation Data
17	Isochronal Indicator: =1 Isochronal Inspection =2 Non-isochronal Inspection



JOB TITLE		EMPLOYEE				PAGE	
JOB NO.		AWD	FWO MAP	FUNCTION	ANALYST	DATE	
W-1	W-2	W-3	W-4	W-5	W-6	W-7	W-8
34							
57000236	331						
57000237	331						
57000243	324						
57000244	331						
57002545	331						
58000776	324						
58000901	331						
59000002	331						
59000003	331						
59000005	331						
59000006	331						
59000010	311						
59000012	321						
59000015	321						
59000018	221						
59000019	221						
59000026	221						
59000070	331						
59000054	324						
59000057	324						
59000058	324						
59000059	324						
59000104	331						
59000105	331						

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JOB TITLE _____												ENGINEER _____		PAGE _____ OF _____		
JOB NO. _____		AWO _____		LWO MAP _____		FUNCTION _____		ANALYST _____		DATE _____						
W-1		W-2		W-3		W-4		W-5		W-6		W-7		W-8		
0000000001	111111111	222222222	333333333	444444444	555555555	666666666	777777777	888888888	999999999	000000000	111111111	222222222	333333333	444444444	555555555	666666666
0000000002	222222222	333333333	444444444	555555555	666666666	777777777	888888888	999999999	000000000	111111111	222222222	333333333	444444444	555555555	666666666	777777777
0000000003	333333333	444444444	555555555	666666666	777777777	888888888	999999999	000000000	111111111	222222222	333333333	444444444	555555555	666666666	777777777	888888888
0000000004	444444444	555555555	666666666	777777777	888888888	999999999	000000000	111111111	222222222	333333333	444444444	555555555	666666666	777777777	888888888	999999999
0000000005	555555555	666666666	777777777	888888888	999999999	000000000	111111111	222222222	333333333	444444444	555555555	666666666	777777777	888888888	999999999	000000000
0000000006	666666666	777777777	888888888	999999999	000000000	111111111	222222222	333333333	444444444	555555555	666666666	777777777	888888888	999999999	000000000	111111111
0000000007	777777777	888888888	999999999	000000000	111111111	222222222	333333333	444444444	555555555	666666666	777777777	888888888	999999999	000000000	111111111	222222222
0000000008	888888888	999999999	000000000	111111111	222222222	333333333	444444444	555555555	666666666	777777777	888888888	999999999	000000000	111111111	222222222	333333333
0000000009	999999999	000000000	111111111	222222222	333333333	444444444	555555555	666666666	777777777	888888888	999999999	000000000	111111111	222222222	333333333	444444444
0000000010	000000000	111111111	222222222	333333333	444444444	555555555	666666666	777777777	888888888	999999999	000000000	111111111	222222222	333333333	444444444	555555555
0000000011	111111111	222222222	333333333	444444444	555555555	666666666	777777777	888888888	999999999	000000000	111111111	222222222	333333333	444444444	555555555	666666666
0000000012	222222222	333333333	444444444	555555555	666666666	777777777	888888888	999999999	000000000	111111111	222222222	333333333	444444444	555555555	666666666	777777777
0000000013	333333333	444444444	555555555	666666666	777777777	888888888	999999999	000000000	111111111	222222222	333333333	444444444	555555555	666666666	777777777	888888888
0000000014	444444444	555555555	666666666	777777777	888888888	999999999	000000000	111111111	222222222	333333333	444444444	555555555	666666666	777777777	888888888	999999999
0000000015	555555555	666666666	777777777	888888888	999999999	00000000										

**4-70**





[illegible]

**4.7.3.1 Purpose.** This program generates a report file listing the removal action by ascending WUC.

**4.7.3.2 Input Data and Procedures.** The input data consists of the output of the sort described in Paragraph 4.7.2.3.

**4.7.3.3 Output Description.** The output consists of two report files (one for Isochronal and one for Non-Isochronal data), both having 70 characters to a data record blocked 40 to a tape record. It required two minutes on the IBM 370 to generate and print both report files for the 1620 F-106 WUCs. A sample output is shown in Figure 4-45.

**4.7.4.1 Purpose.** The purpose of this program is to sort the output file Removal Frequency for further processing.

**4.7.4.2 Input Data and Procedures.** The input data consists of the tape file Removal Frequency as described in Paragraph 4.7.1.3.

**4.7.4.3 Output Description.** The output tape file, 20 characters to a data record blocked 90 to a tape record, consists of the Isochronal and Non-Isochronal WUC repair action frequency data,

**Figure 4-45. Sample Output —  
Report of Removal  
Frequency**

sorted according to the following key in descending order.

<u>Column</u>	<u>Description</u>
11-15	Non-Isochronal Frequency

**It required about one minute on the IBM 370 to sort 1620 records for the 150-aircraft F-106 fleet.**

**4.7.5.1 Purpose.** This program generates a report file listing the Non-Isochronal WUC by decreasing removal action frequency.

4.7.5.2 Input Data and Procedures. The input data consists of the output of the sort described in Paragraph 4.7.4.3.

4.7.5.3 Output Description. The output consists of a report file, 70 characters to a data record blocked 40 to a tape record. It required two minutes on the IBM 370 to generate and print the report files for the 1620 F-106 WUCs. The output is very similar to that shown in Figure 4-45.

#### 4.7.6 SORT ISOCHRONAL FREQUENCY

4.7.6.1 Purpose. The purpose of this program is to sort the output file Removal Frequency for further processing.

4.7.6.2 Input Data and Procedures. Input data consists of the tape file Removal Frequency as described in Paragraph 4.7.1.3.

4.7.6.3 Output Description. The output tape file, 20 characters to a data record blocked 90 to a tape record, consists of the Isochronal and Non-Isochronal WUC repair action frequency data, sorted according to the following key in descending order.

<u>Column</u>	<u>Description</u>
6-10	Isochronal Frequency

It required about one minute on the IBM 370 to sort 1620 records for the 150-aircraft F-106 fleet.

#### 4.7.7 WRITE ISOCHRONAL FREQUENCY

4.7.7.1 Purpose. This program generates a report file, listing the Isochronal WUC by decreasing repair action frequency.

4.7.7.2 Input Data and Procedures. Input data consists of the output of the sort described in Paragraph 4.7.6.3.

4.7.7.3 Output Description. The output consists of a report file, 70 characters to a data record blocked 40 to a tape record. It requires two minutes on the IBM 370 to generate and print the report files for the 1620 F-106 WUCs. The output is very similar to that shown in Figure 4-45.

#### 4.7.8 SORT REMOVAL INTERVALS

4.7.8.1 Purpose. This program is used to sort output file Removal Intervals for further processing.

4.7.8.2 Input Data and Procedures. The input data consists of the tape file Removal Intervals as described in Paragraph 4.7.1.3.

4.7.8.3 Output Description. The output tape files, 20 characters to a data record blocked 90 to a tape record, consists of removal intervals, in weeks and flight hours, sorted in the following ascending order.

<u>Key</u>	<u>Column</u>	<u>Description</u>
1	17	Isochronal Indicator
2	19	Data Type
3	1-5	Work Unit Code

It required about three minutes to sort the 121,721 records on the IBM 370 for the fleet of 150 F-106 aircraft.

#### 4.7.9 CUMULATIVE DISTRIBUTION FOR REMOVAL INTERVALS

4.7.9.1 Purpose. This program generates cumulative distribution plots for removal intervals by WUC and isochronal subset type. The number of observations, maximum and minimum values, and the mean and variance of the observation are printed on the top of each plot.

4.7.9.2 Input Data and Procedures. The input data card has the following format.

<u>Column</u>	<u>Description</u>
1-5	Printout Suppression Cutoff for Non-Isochronal Subset
6-10	Printout Suppression Cutoff for Isochronal Subset

Figure 4-46 is a sample data card.

4.7.9.3 Output Description. Cumulative distribution plots by a printer contain:

- a. Work Unit Code (WUC)
- b. Output Data — One of two types:
  - Removal Interval Length in Weeks
  - Removal Interval Length in Flight Hours
- c. Isochronal or Non-Isochronal Subset
- d. Number of Observations
- e. Maximum and Minimum Values
- f. Mean and Variance

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JOB TITLE _____										ENGINEER _____										PAGE _____ OF _____									
JOB NO. _____										ANALYST _____										DATE _____									

W-1	W-2	W-3	W-4	W-5	W-6	W-7	W-8
0 0 0 0 0 0 0 0 0 0 1 1 1 1 1 1 1 2 2 2 2 2 2 2 3 3 3 3 3 3 3 4 4 4 4 4 4 4 5 5 5 5 5 5 5 6 6 6 6 6 6 6 7 7 7 7 7 7 7 8 8 8 8 8 8 8 9 9 9 9 9 9 9	1 1 1 1 1 1 1 2 2 2 2 2 2 2 3 3 3 3 3 3 3 4 4 4 4 4 4 4 5 5 5 5 5 5 5 6 6 6 6 6 6 6 7 7 7 7 7 7 7 8 8 8 8 8 8 8 9 9 9 9 9 9 9	2 2 2 2 2 2 2 3 3 3 3 3 3 3 4 4 4 4 4 4 4 5 5 5 5 5 5 5 6 6 6 6 6 6 6 7 7 7 7 7 7 7 8 8 8 8 8 8 8 9 9 9 9 9 9 9	3 3 3 3 3 3 3 4 4 4 4 4 4 4 5 5 5 5 5 5 5 6 6 6 6 6 6 6 7 7 7 7 7 7 7 8 8 8 8 8 8 8 9 9 9 9 9 9 9	4 4 4 4 4 4 4 5 5 5 5 5 5 5 6 6 6 6 6 6 6 7 7 7 7 7 7 7 8 8 8 8 8 8 8 9 9 9 9 9 9 9	5 5 5 5 5 5 5 6 6 6 6 6 6 6 7 7 7 7 7 7 7 8 8 8 8 8 8 8 9 9 9 9 9 9 9	6 6 6 6 6 6 6 7 7 7 7 7 7 7 8 8 8 8 8 8 8 9 9 9 9 9 9 9	7 7 7 7 7 7 7 8 8 8 8 8 8 8 9 9 9 9 9 9 9
S	D						

Figure 4-46. Sample Input — Cutoff for Removal Intervals

The plot tape consists of 130-character data records blocked 15 to a tape record. It took seven minutes on the IBM 370 to process 121,721 records for the F-106 fleet and one hour on the printer to make 1050 plots. A sample output from a recent F-106 run is shown in Figure 4-47.

#### 4.8 AIRCRAFT INSPECTION HISTORIES

**4.8.1 PURPOSE.** The purpose of this task is to produce a plot of accumulated flying hours versus calendar time in weeks for inspections.

**4.8.2 INPUT DATA AND PROCEDURES.** The input data consists of plot titles, inspection WUCs, and plot symbols. The data card deck has the following format.

Card	Column	Description
1	1-80	Title describing the horizontal axis
2	1-80	Title describing the vertical axis
3	1	Number of Inspection Work Unit Code (WUC)
3	10-14	First Inspection WUC



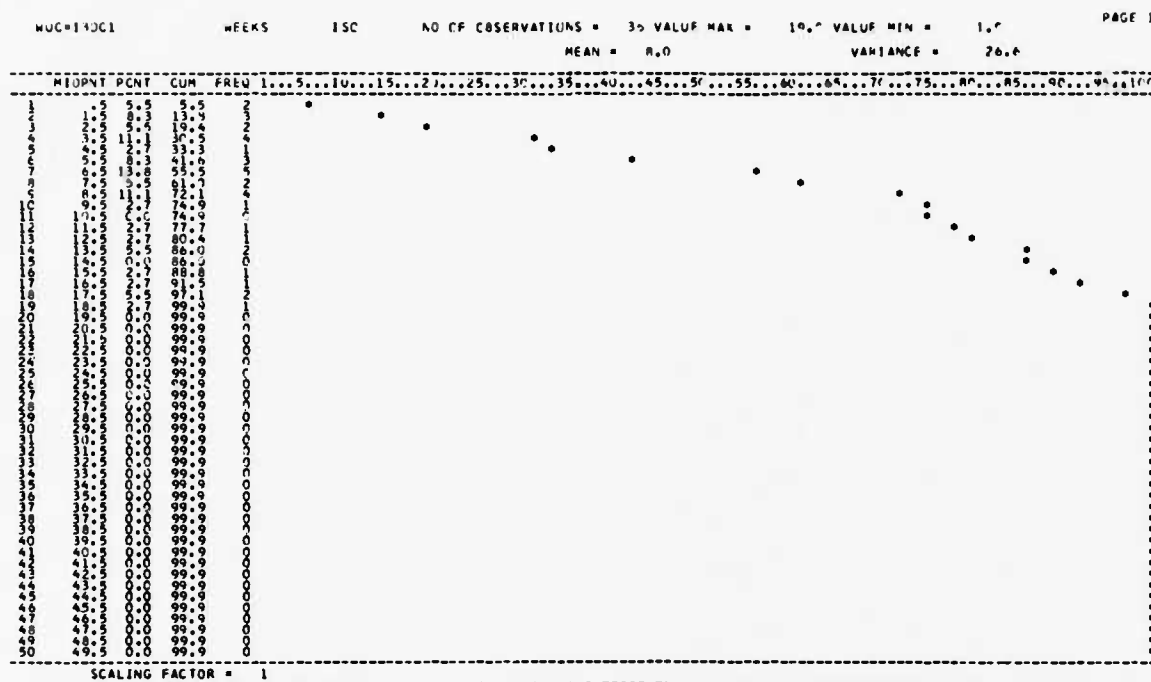


Figure 4-47. Sample Output — Cumulative Distribution for Removal Action Interval

Card	Column	Description
3	20-24	Second Inspection WUC
3	30-34	Third Inspection WUC
3	40-44	Fourth Inspection WUC
3	50-54	Fifth Inspection WUC
3	60-64	Sixth Inspection WUC
3	70	Plot symbol for first WUC
3	71	Plot symbol for second WUC
3	72	Plot symbol for third WUC
3	73	Plot symbol for fourth WUC
3	74	Plot symbol for fifth WUC
3	75	Plot symbol for sixth WUC

The current program handles up to six inspection WUCs. If fewer than six inspection WUCs are required, the unused columns should be left blank. A sample input data is shown in Figure 4-48.



[illegible]

**Figure 4-48. Sample Input — Aircraft Inspection Histories**

**4.8.3 OUTPUT DESCRIPTION.** A sample output is shown in Figure 4-49. The aircraft serial number and a list of the plot symbols with matching inspection WUCs are printed on the top of each plot. An asterisk symbol will be printed if more than one inspection WUC occurs at the same week and flight hour. The 150-aircraft F-106 fleet took three minutes on the IBM 370 to produce 21,997 inspection history plots.

#### 4.9 COMPUTER OUTPUT ANALYSIS

**4.9.1 OUTPUT ANALYSIS — FREQUENCY ANALYSIS — TASK I.** The purpose of this test is to determine what kinds of malfunctions occur on a WUC, and when they are discovered. These results are then compared with the definition of the scheduled inspections themselves. The results provide a basis for answering such questions as:

- a. Do the inspections discover the discrepancies they look for or are these more often discovered in some other phase of aircraft operations?
- b. Are there malfunctions discovered in other phases for which changes in the current inspection packages might be proposed?

The maintenance action frequency analyses were used extensively during the maintenance program analysis and definition process. Task I also supplied input data to the effectiveness analyses.

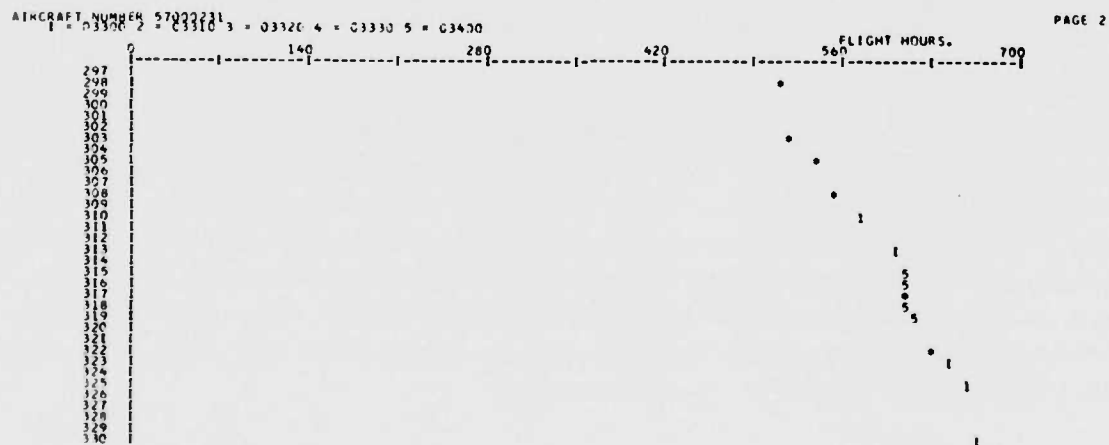
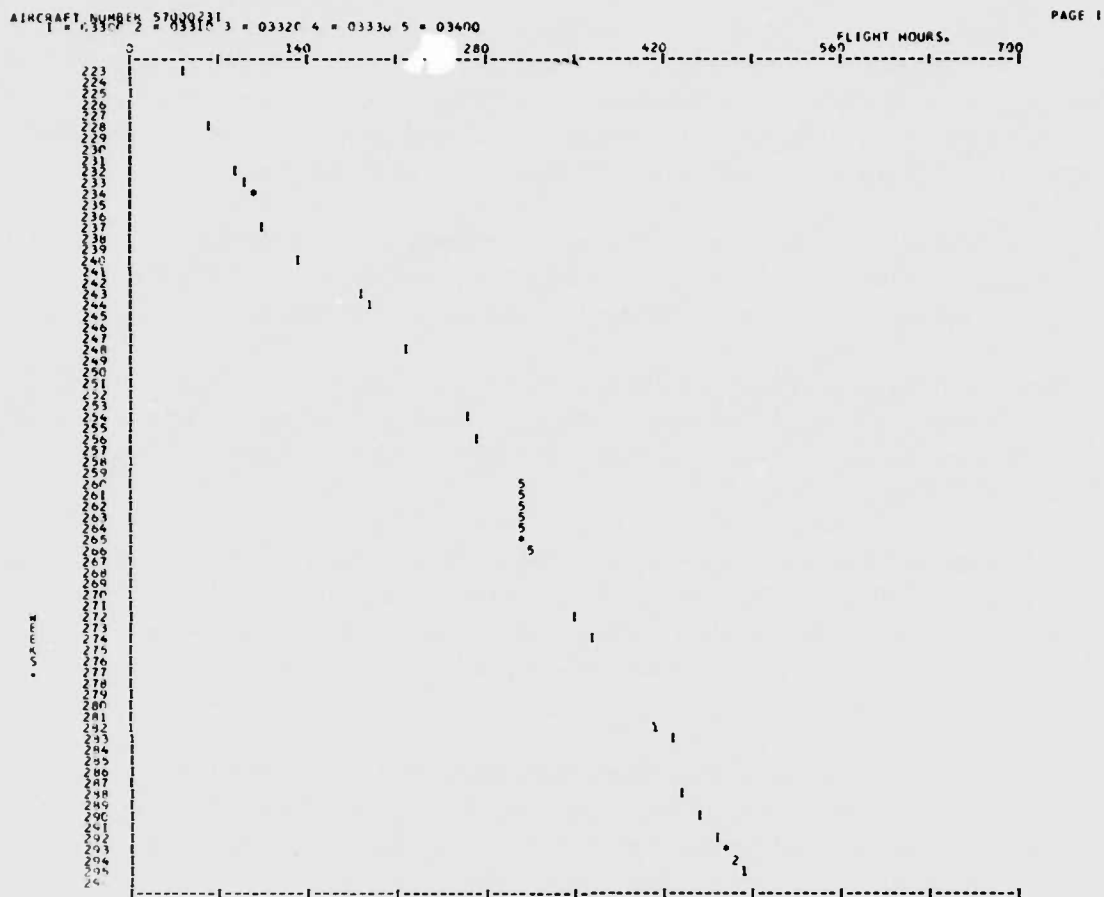


Figure 4-49. Sample Output — Aircraft Inspection Histories  
4-79

**4.9.2 OUTPUT ANALYSIS — MANHOUR AND NOR TIME ANALYSES — TASK II.** The purpose of this task is to determine the variation in NORM hours and manhours charged to each type of scheduled or special inspection. Any NOR time charged during preflights and basic postflights is recorded as unscheduled maintenance. Manhours expended during the look phase of these inspections is charged as support general, however, so these inspections are included when calculating the look-phase manhour distributions.

For a given type of scheduled inspection, each occurrence of that inspection on an aircraft provides an observation of the NORM hours charged during the look and repair phases of the inspection and the manhours charged during the look phase.

In addition, this analysis calculated the number of manhours required for maintenance actions on specific WUCs, either repair actions stemming from inspections or unscheduled maintenance actions. Also, the NORM and NORS hours charged against specific WUCs are calculated.

The NORM hour per scheduled inspection distributions are used in conjunction with the Network Analysis Model to obtain estimates of network branch span times for use in evaluating the new scheduled inspection packages. The NORM and manhour per WUC maintenance action results are required for the effectiveness analyses of alternative maintenance programs.

From the NORM and manhour per maintenance action data, the corresponding rates for each WUC set are derived. These in turn are input to the effectiveness model so that the NORM hours and maintenance manhours accumulated for unscheduled maintenance during the intervals between inspections can be calculated.

**4.9.3 OUTPUT ANALYSIS — INTERVAL LENGTH ANALYSIS — TASK III.** The purpose of this analysis is to determine the inspection interval lengths actually experienced during the current maintenance program and also to determine interval variability. The WUC maintenance action interval distributions provided a basis for determining WUC failure characteristics.

**4.9.4 OUTPUT ANALYSIS — EFFECT OF TIME AFTER INSPECTION — TASK IV.** This analysis was performed to determine the trends of various data bank variables with time after scheduled inspections and the effects of scheduled inspections on these trends. The correlation and regression analyses provided linear empirical functions for the various parameters versus time after for use in the effectiveness analyses. These results were supplemented by the trend analysis scatter diagrams so that the validity of the linear regression analyses could be assessed and appropriate adjustments made when the time effect was clearly nonlinear.

**4.9.5 OUTPUT ANALYSIS — REMOVAL ACTION FREQUENCIES AND INTERVAL LENGTH DISTRIBUTIONS.** The purpose of these analyses was to provide a basis for determining the requirements for time changes and scheduled removals for the various WUCs. The suitability of the current time change specifications was assessed using this data in the maintenance program analysis process. These results, along with the results from Task III, were the basis for determining how well the current time change specifications agreed with the failure characteristics of the WUC.

**4.9.6 OUTPUT ANALYSIS — AIRCRAFT INSPECTION HISTORIES.** The inspection history analysis provided a plot of inspection events versus weeks and accumulated flying hours for each aircraft in the data bank. These provide a record of scheduled inspection events and intervals as they actually occurred for each aircraft. This analysis supplemented the other tasks in determining actual inspection flow times and intervals. This was necessary because recording anomalies and errors in the data system resulted in apparent gaps during the inspections and spurious short intervals that could be corrected manually. Improved logic for Tasks II and III was developed as a result of processing the results of this task.

## SECTION 5

### EFFECTIVENESS AND COST PROGRAMS

#### 5.1 GENERAL DESCRIPTION

For the Phase III study, three sets of programs were developed:

- a. Effectiveness Model
- b. Network Analysis Model (NAM)
- c. Manhour and Not Operational Ready — Maintenance (NORM) Data (for WUC sets)

Detailed discussions, sample input, sample output, and IBM 370 running statistics for these programs are in Paragraphs 5.2, 5.3, and 5.4, respectively. Listings of the programs, together with the control cards, are contained in Paragraphs 6.13, 6.14, and 6.15, respectively.

#### 5.2 EFFECTIVENESS MODEL

5.2.1 PURPOSE. The purpose of the effectiveness model is to predict the impact on aircraft availability and mission reliability of maintenance program variations in scheduled inspection package content and interval lengths. The requirement to meet the flying hour program is treated as a constraint. This is done by inputting aircraft utilization to the effectiveness model along with the description of the alternative maintenance program. The model then calculates the effectiveness as a function of interval length over the maintenance program period, which is the time interval between occurrences of the major inspection of the maintenance program.

The basic approach of the effectiveness model is to calculate the values of certain measures that describe the impact of the maintenance program by a process of summation starting at the work unit code (WUC) set level. For this reason, the distributions of the basic variables involved in this process can be described merely in terms of their mean and standard deviations, since application of the "central limit" theorem implies that the sum variables calculated by the model will be approximately normally distributed independently of how the summands are distributed. Use of this fact in developing the model has vastly simplified its structure and minimized the need for manipulating probability distributions for the variables.

A general flow chart of the effectiveness model is shown in Figure 5-1. Calculations made by the model fall naturally into four major groupings. The first consists of those at the Inspection Task/WUC set level; results of these calculations are combined in the second step to produce aircraft-level values. The third step consists of those calculations

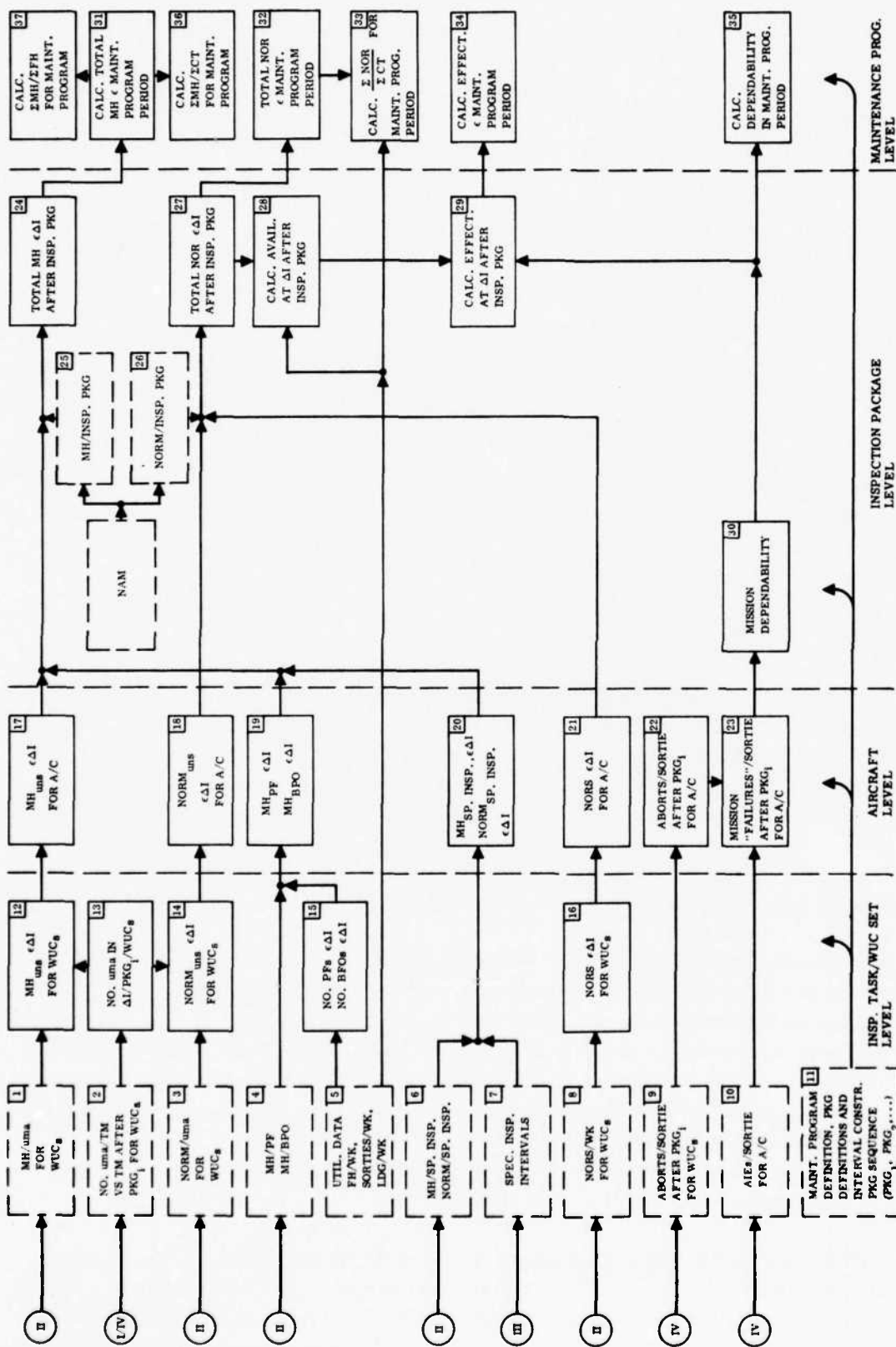


Figure 5-1. Effectiveness Model

pertaining to two consecutive inspection packages and the intervening interval,  $\Delta I$ . At this level, total not operational ready - supply (NORS), availability, dependability, manhours, and effectiveness are evaluated parametrically as functions of inspection package type and interval length,  $\Delta I$ . The final step consists of combining the results obtained in the third step to produce total manhours, NOR hours, availability, and effectiveness for the maintenance program period.

**5.2.2 INPUT DATA AND PROCEDURES.** In Figure 5-1, input values are represented by the blocks with dashed outlines. Unscheduled maintenance is described by data input in Blocks 1, 2, and 3. This includes the number of manhours per unscheduled maintenance action for each WUC set, the number of unscheduled maintenance actions per unit time for a WUC set versus time after the inspection package, and the number of NORM hours per unscheduled maintenance action for each WUC set.

In Block 4, the manhour distributions for preflight and basic postflight inspections are input. Total manhours for these inspections during  $\Delta I$  are calculated using this data and the frequencies for these inspections as determined from the aircraft utilization specified in Block 5.

Special inspections are described in Blocks 6 and 7 in terms of the manhours and NORM hours per inspection and inspection intervals. NORS hours per week for each WUC set are input in Block 8.

Operational data on which a measure of dependability can be based is input in Blocks 9 and 10. This data includes the number of aborts per sortie following the different types of inspection packages at the WUC set level and the number of AIEs (accidents, incidents, and emergency unsatisfactory material reports, EUMRs) per sortie at the aircraft level.

Additional data describing the maintenance program, such as the inspection package sequence and constraints on the variability of  $\Delta I$ , is input in Block 11. The distributions of manhours and NORM hours per inspection package, as calculated by NAM, are input in Blocks 25 and 26.

The effectiveness analysis procedure consists of the four major calculation steps mentioned earlier. These are described in detail in the following paragraphs.

**5.2.2.1 Inspection Task and WUC Set Calculations.** At the inspection task and WUC set level, distributions for the numbers of manhours and NORM hours during  $\Delta I$  for each WUC set are calculated in Blocks 12 and 14 in Figure 5-1. This is accomplished by computing the expected number of unscheduled maintenance actions during  $\Delta I$  for each WUC set following the different types of inspection packages in Block 13 and combining them with the manhours and NORM hours rates.

To calculate preflight and basic postflight inspection manhours, distribution of the number of sorties during  $\Delta I$  is calculated from the utilization data in Block 5. This

results in an estimate for the distribution of the number of basic postflight inspections during  $\Delta I$  and, using a derived ratio,  $r$ , for the number of preflights per postflight, an estimate for the distribution of the number of preflights in  $\Delta I$  in Block 15. Combining these results with the input inspection manhours, distribution of the number of preflight and basic postflight manhours is calculated in Block 19.

The NORS hours during  $\Delta I$ , by WUC set, are calculated in Block 16 using the rates input in Block 8.

**5.2.2.2 Aircraft-Level Calculations.** Unscheduled maintenance manhours and NORM hours during  $\Delta I$  for the various WUC sets are aggregated to obtain the distributions for these parameters at the aircraft level in terms of their mean and standard deviations.

For special inspections, the distribution for the number of special inspections during  $\Delta I$  is obtained from the interval distribution for each type of inspection. Manhours and NORM hours for each type of special inspection during  $\Delta I$  are then calculated in Block 20 from the input manhours and NORM hours per inspection.

In Block 22, the aborts/sortie rates following different types of inspections are calculated for the total aircraft by summing the rates for the various WUC sets. The aircraft abort rate is combined with the AIEs/sortie rate in Block 23 to obtain a mission "failures" per sortie rate following the different types of inspections.

**5.2.2.3 Inspection Packages and Intervening Interval,  $\Delta I$ .** Parametric results for the several variables for two consecutive inspection packages and the intervening interval are obtained as functions of  $\Delta I$ .

The following calculations are included in this step: the distribution of the total manhours during  $\Delta I$  following a given type of inspection package is calculated in Block 24 of Figure 5-1 by determining the distribution for the total of unscheduled maintenance manhours in  $\Delta I$ , preflight and basic postflight manhours in  $\Delta I$ , special inspection manhours in  $\Delta I$ , and manhours in the following scheduled inspection.

Distribution for the total NOR hours during  $\Delta I$  and the subsequent scheduled inspection is calculated in a similar way in Block 27 by determining the distribution for the total of the unscheduled NORM hours in  $\Delta I$ , the special inspection NORM hours in  $\Delta I$ , the total NORS hours in  $\Delta I$ , and the NORM hours in the subsequent scheduled inspection.

From the utilization data input in Block 5, distribution of the length of  $\Delta I$  in calendar time when  $\Delta I$  is expressed in terms of one of the other three time bases - flying hours, sorties, and landings - is calculated. This parameter is required in order to calculate the distribution of availability in Block 28. Availability is the fraction of the time the aircraft is operationally ready, that is:

$$A_V = 1 - \frac{\sum \text{NOR}}{\sum \text{CT}}$$



where  $\Sigma CT$  is accumulated calendar time. This measure is calculated as a function of  $\Delta I$  in Block 28.

From the mission "failure" rate ( $F/S/A$ ) calculated in Block 23, the dependability parameter is calculated in Block 30. This is the probability that a mission "failure," that is, an abort or AIE, will not occur during the sortie:

$$D = \exp (- F/S/A).$$

Effectiveness as a function of  $\Delta I$  for two consecutive inspection packages and the intervening interval is evaluated at Block 29. This consists of determining the probability distribution of the product of availability and dependability.

**5.2.2.4 Distribution of Total Manhours.** In the fourth and final step of the effectiveness analysis, distribution of the total manhours across the maintenance program is determined as a function of  $\Delta I$  in Block 31. The NOR hours versus  $\Delta I$  distributions for the consecutive packages are the basis for determining the NOR hours for the maintenance program as a function of  $\Delta I$  in Block 32.

Distributions for total calendar time for the maintenance program period are calculated and used to calculate distributions for the manhours per unit time in Block 36, NOR hours per unit time in Block 33, and manhours per flight hour in Block 37.

Dependability during the maintenance program is calculated as a function of  $\Delta I$  in Block 35, and the distribution of effectiveness as a function of  $\Delta I$  is calculated in Block 34.

**5.2.3 DETAILED DESCRIPTION OF EFFECTIVENESS MODEL.** A detailed flow chart of the effectiveness model is shown in Figure 5-2. In the following discussion, the equations for the various steps in the analysis will be derived. Definitions of the parameters and variables in the model are given first.

The parameters that define the maintenance program and major inspections are input in Blocks 1 and 2 of Figure 5-2. These are:

DELI	The basic inspection interval length, $\Delta I$ .
KI	An integer specifying the time base for $\Delta I$ , $KI = 1, 2, 3, 4$ for $\Delta I$ in weeks, flight hours, sorties, and landings, respectively.
NSCT	The number of different types of scheduled inspection packages.
NFOL(I)	The number of types of scheduled inspection packages that can occur at the end of the interval $\Delta I$ (DELI) following an inspection package of Type I.
NSCH(I, J)	The number of intervals that begin with a Type I inspection package and end with a Type J.

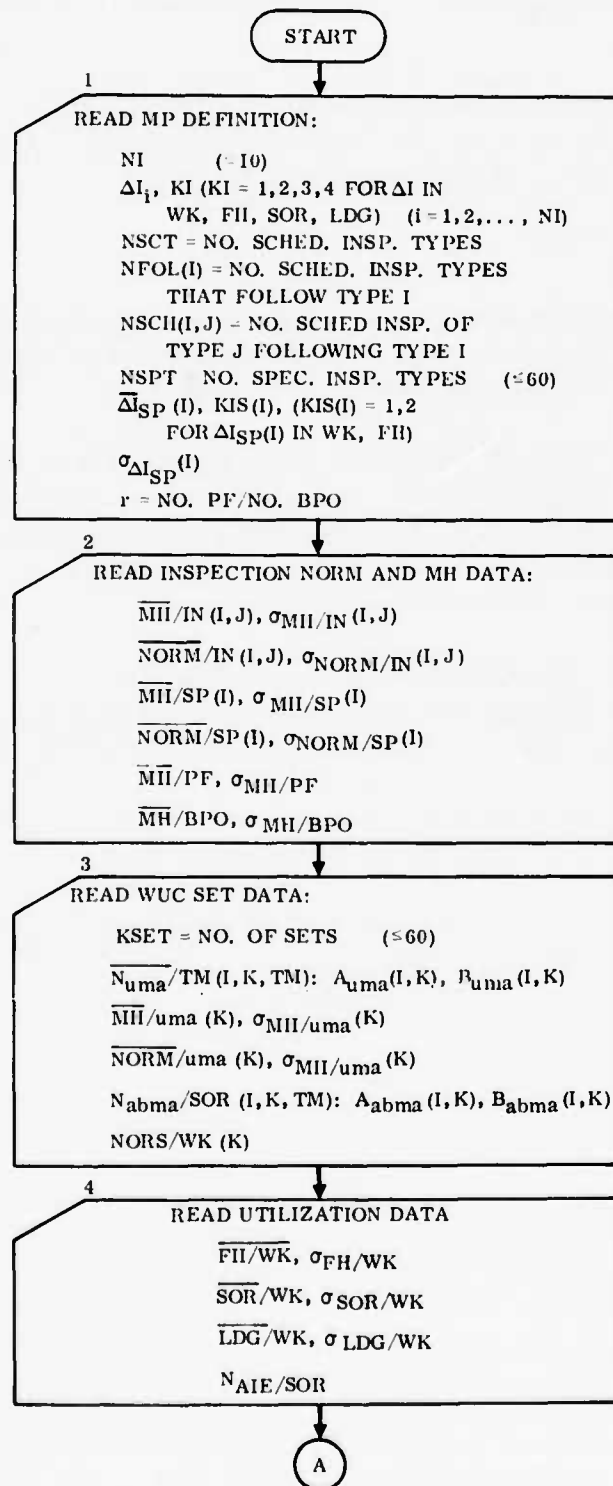


Figure 5-2. Detailed Effectiveness Model (Sheet 1)

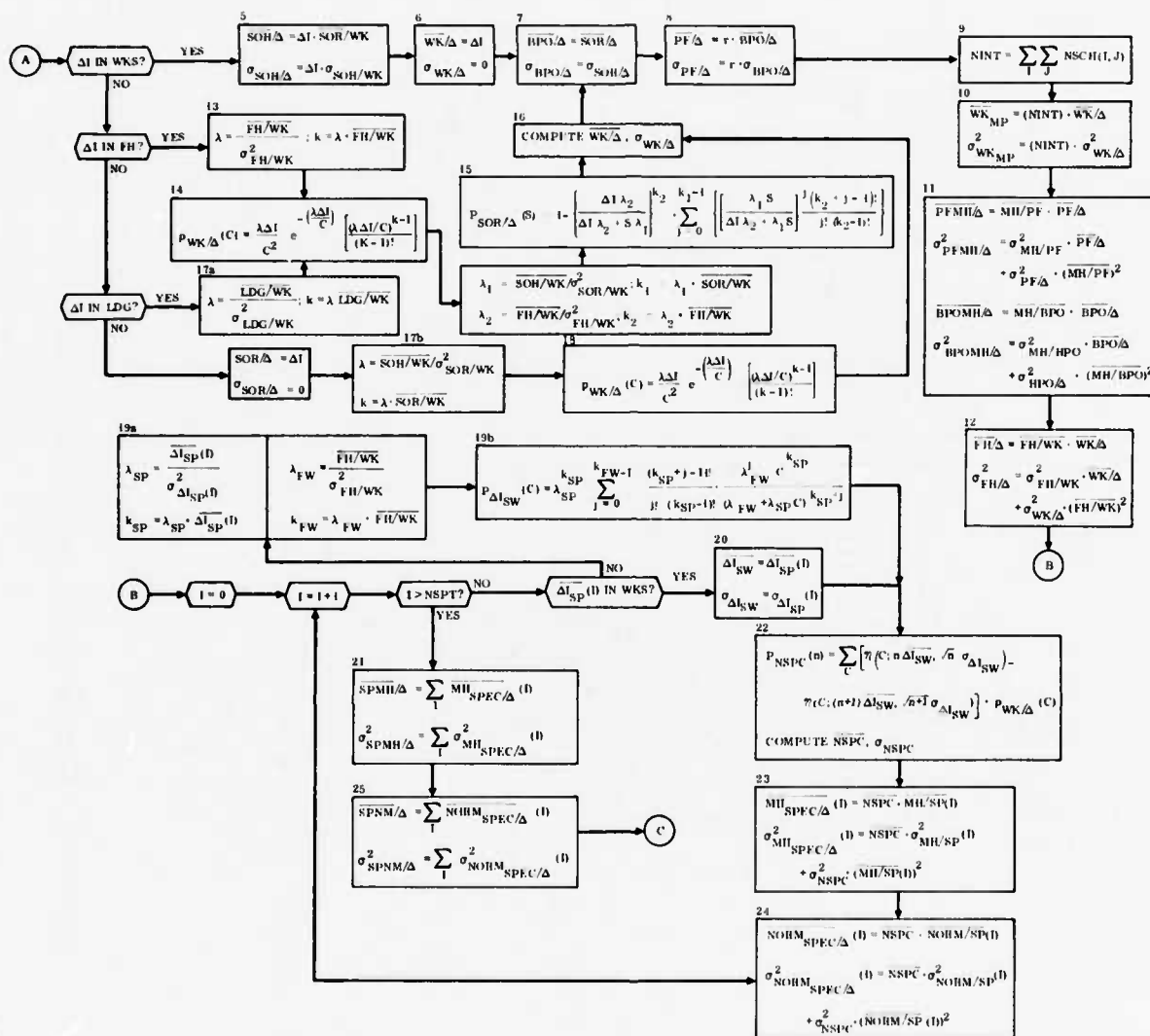


Figure 5-2. Detailed Effectiveness Model (Sheet 2)

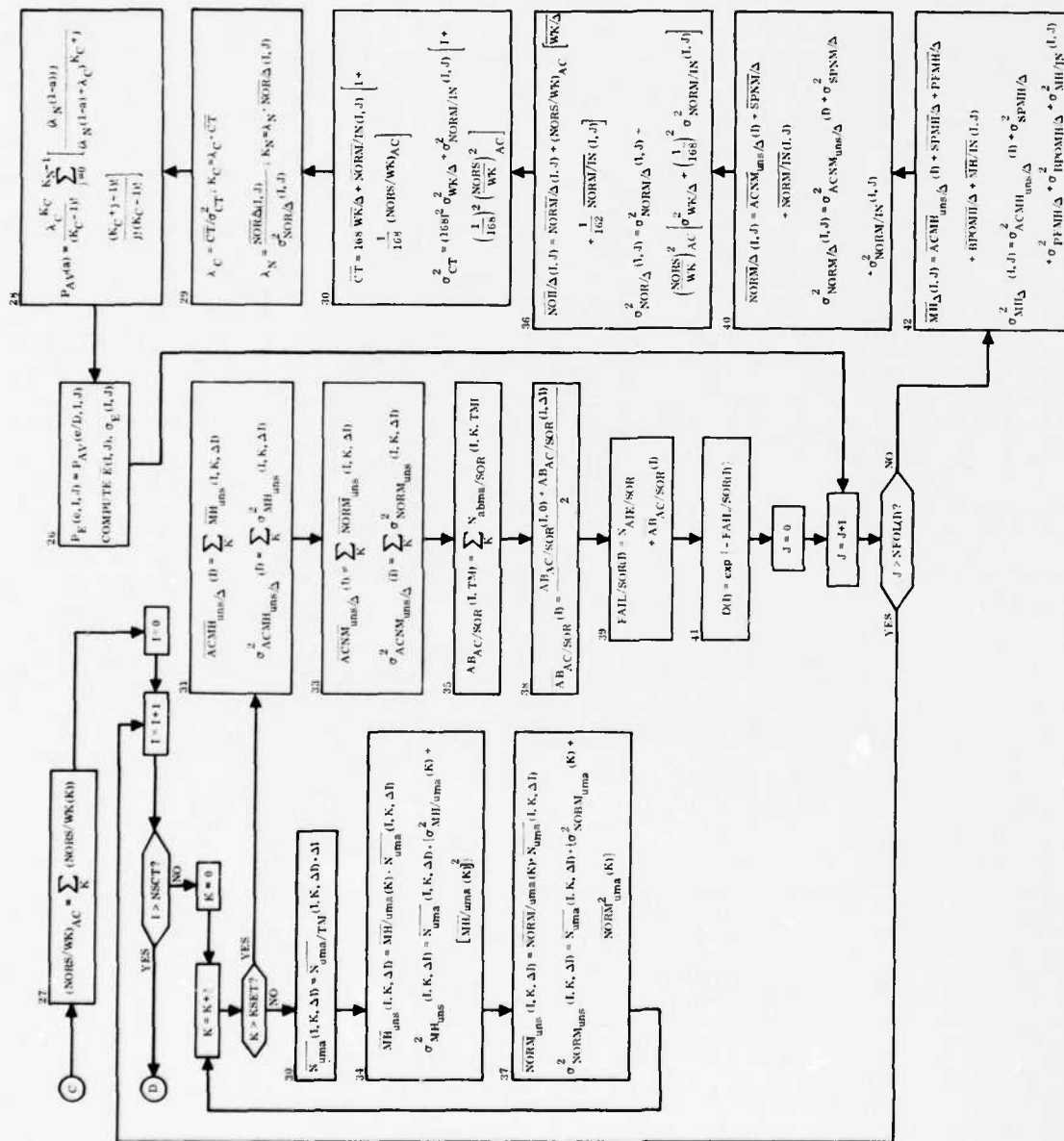


Figure 5-2. Detailed Effectiveness Model (Sheet 3)

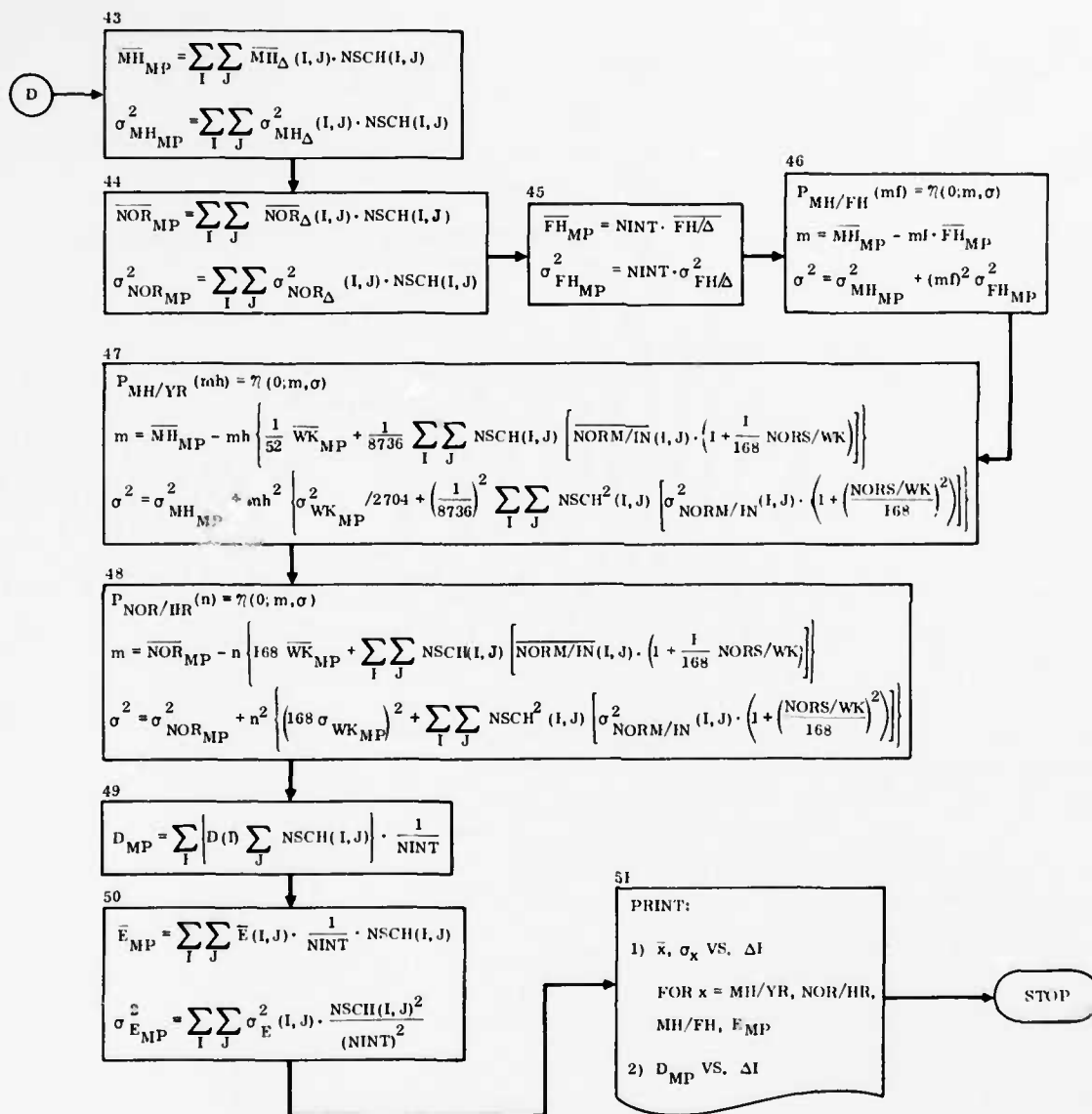


Figure 5-2. Detailed Effectiveness Model (Sheet 4)

EMHI(I, J)	The mean manhours for inspection package Type J when it follows inspection package Type I in Block 2.
AN(I, J), BN(I, J)	The coefficients of the linear regression function in Block 2 for the NORM hours in inspection package J versus time after the preceding inspection package I. That is, $\overline{\text{NORM}}/\text{IN}(I, J) = \text{AN}(I, J) + \text{BN}(I, J) \cdot (t)_{\text{after } I}$
SMHI(I, J)	The standard deviation of the manhours per inspection package J following inspection package I.
SNI(I, J)	The standard deviation of the NORM hours in inspection package J following inspection package I.
NI	The number of values of $\Delta I(\text{DELI})$ to be used in the parametric evaluation.

Each pair of values I and J identifies a different type of inspection interval. The total number (NINT) of inspection intervals is then given by:

$$\text{NINT} = \sum_{I=1}^{\text{NSCT}} \sum_{J=1}^{\text{NFOL}(I)} \text{NSCH}(I, J),$$

and the length of the maintenance program period not counting inspection flow times is:

$$\text{NINT} \cdot \Delta I.$$

The linear regression function for NORM hours per inspection package is input for inspection packages retained from the current program. For new inspection packages, the network analysis model (NAM) provides the needed data.

Special inspections are described by the following parameters included in Blocks 1 and 2 of Figure 5-2.

NSPT	Number of different types of special inspections.
DISP, SISP	Mean and standard deviations of the interval length between inspections, $\Delta I_{\text{sp}}$ .
KIS	An integer specifying the time base in which DISP is measured. KIS = 1 or 2 for time in weeks or flight hours respectively (Block 1).
EMHS, SMHS	The mean and standard deviation, $\overline{\text{MH}}/\text{SP}(I)$ and $\sigma_{\text{MH}/\text{SP}(I)}$ , in Block 2 of manhours in Ith special inspection.
ENS, SNS	The mean and standard deviation, $\overline{\text{NORM}}/\text{SP}(I)$ and $\sigma_{\text{NORM}/\text{SP}(I)}$ , of the NORM hours per special inspection.

The preflight and basic postflight inspections are defined by the following parameters input in Blocks 1 and 2.

R	The ratio of the number of preflight inspections to basic post-flight inspections.
EMHP, SMHP	The mean and standard deviation, MH/PF and $\sigma_{MH/PF}$ , in Block 2 of the manhours per preflight inspection.
EMHB, SMHB	The mean and standard deviation, MH/BPO and $\sigma_{MH/BPO}$ , in Block 2 of the manhours per basic postflight inspection.

Unscheduled maintenance data can be specified for up to 60 sets of WUCs. The number of sets to be used for a specific run is given by the value of KSET in Block 3. For each set, the following items are required.

EMHU, SMHU	The mean and standard deviation, MH/uma and $\sigma_{MH/uma}$ , of manhours per unscheduled maintenance action in Block 3.
ENU, SNU	The mean and standard deviation of NORM per unscheduled maintenance action, NORM/uma and $\sigma_{NORM/uma}$ , in Block 3.
ANU, BNU	The coefficients of the linear regression function for the number of unscheduled maintenance actions, $\overline{N_{uma}}$ , per unit time versus time after the inspection in Block 3: $\overline{N_{uma}} = ANU(I, K) + BNU(I, K) \cdot (t)_{after I}$ , for the Kth work unit code set and Ith inspection type.
UMAS	The minimum value for $\overline{N_{uma}}$ .
DIK	Set equal to 1.0 when $(t)_{after I}$ is to be measured from the inspection at the beginning of the interval, and set equal to 3.0 when $(t)_{after I}$ is measured from the inspection at the start of the preceding interval.
ANAB, BNAB	The coefficients of the linear regression function for the number of abort maintenance actions per sortie versus time after inspection package I for the Kth work unit code set in Block 3: $N_{abort} = ANAB(I, K) + BNAB(I, K) \cdot (t)_{after I}$ .
ENWK	The mean number of NORS hours per week charged to the set.

This input data is obtained from the corresponding data generated by the statistical analyses for all the WUCs included in the set. This is accomplished by a simple summation process except for manhours and NORM hours per maintenance action. These are obtained from:

$$EMHU(K) = \sum_{i=1}^N n_i (\overline{MH/uma})_i / \sum_{i=1}^N n_i,$$

where

$n_i$  is the number of unscheduled maintenance actions per unit time on WUC<sub>i</sub>

$(\overline{MH/uma})_i$  is the mean number of manhours per unscheduled maintenance action on WUC i

N is the number of WUCs in set K.

and

$$ENU(K) = \sum_{i=1}^N n_i (\overline{NORM/uma})_i / \sum_{i=1}^n n_i$$

where

$(\overline{NORM/uma})_i$  is the mean number of NORM hours per unscheduled maintenance action on WUC i.

The standard deviations for manhours and NORM per unscheduled maintenance action are given by:

$$SMHS(K) = \sum_{i=1}^N \left\{ n_i \left[ (\sigma_{MH/uma})_i^2 + \left( (\overline{MH/uma})_i - EMHU(K) \right)^2 \right] \right\} / \sum_{i=1}^N n_i$$

and

$$SNS(K) = \sum_{i=1}^N \left\{ n_i \left[ (\sigma_{NORM/uma})_i^2 + \left( (\overline{NORM/uma})_i - ENU(K) \right)^2 \right] \right\} / \sum_{i=1}^N n_i$$

where

$(\sigma_{MH/uma})_i$  and  $(\sigma_{NORM/uma})_i$  are the standard deviations for WUC<sub>i</sub>.

The values of  $n_i$  for the current maintenance program are the numbers of unscheduled maintenance actions encountered in the data bank. The unscheduled manhour and NORM data for each WUC are obtained from the statistical analysis of MH and NORM hours per maintenance action.

Utilization is specified by the following parameters in Block 4:

EFHW, SFHW	The mean and standard deviation of flight hours per week, $\overline{FH/WK}$ and $\sigma_{FH/WK}$ .
ESOW, SSOW	The mean and standard deviation of sorties per week, $\overline{SOR/WK}$ and $\sigma_{SOR/WK}$ .



ELDW, SLDW	The mean and standard deviation of landings per week, $\overline{\text{LDG/WK}}$ and $\sigma_{\text{LDG/WK}}$ .
AIES	The number of accidents, incidents, and EUMRs per sortie, $N_{\text{AIE/SOR}}$ .

The appropriate values for the current program can be obtained from the analysis of the effect of time after an inspection. Each of these utilization variables is correlated with time after a periodic inspection. The values obtained from the regression lines at a time approximately half-way between periodics can be taken as mean values independent of time. The corresponding standard deviation is the standard deviation of the regression obtained from the regression analysis.

At point A in Figure 5-2 (Sheet 2), the distribution  $P_{\text{WK}/\Delta}$  for  $\Delta I$  in weeks is derived for the cases in which the time base for  $\Delta I$  is flight hours, sorties, or landings. For  $\Delta I$  input in flying hours, for example:

$$P_{\text{WK}/\Delta}(C) = \Pr \{ \text{No. wks } \epsilon \Delta I \leq C \}$$

The distribution of flight hours per week is taken to be given by an Erlang distribution; hence, for Block 14 in Figure 5-2:

$$P_W(C) = \frac{\lambda \Delta I}{C^2} e^{-\left(\frac{\lambda \Delta I}{C}\right)} \left[ \frac{(\lambda \Delta I / C)^{k-1}}{(k-1)} \right],$$

where

$$\lambda = \frac{\overline{\text{FH/WK}}}{\sigma_{\text{FH/WK}}}^2$$

and

$$k = \left[ \lambda \cdot \overline{\text{FH/WK}} \right] \text{ are obtained in Block 13.}$$

Here  $[a]$  indicates the greatest integer less than  $a$ . Values for  $p$  are actually calculated for  $k$  and  $k+1$ . The final result is found by interpolating between these results. This same procedure is used for all Erlang distribution calculations in the model.

The same distribution is used when  $\Delta I$  is in sorties or landings, with  $\lambda$  and  $k$  being calculated in Blocks 17a or 17b.

To determine the number of basic postflights and preflights, the number of sorties in  $\Delta I$  must be determined. For  $\Delta I$  in flying hours or landings,  $P_{\text{WK}/\Delta}$  is first obtained as above and the distribution for the number of sorties in  $\Delta I$  is calculated in Block 15.

Taking both flight hours per week and sorties per week to have Erlang distribution, one obtains

$$P_{\text{SOR}/\Delta}(s) = \Pr \{ \text{No. sorties} \in \Delta I \leq s \}$$

$$= 1 - \left\{ \frac{\Delta I \lambda_2}{\Delta I \lambda_2 + s \lambda_1} \right\}^{k_2} \sum_{j=0}^{k_1-1} \left\{ \left[ \frac{\lambda_1 s}{\Delta I \lambda_2 + s \lambda_1} \right]^j \frac{(k_2 + j - 1)!}{j! (k_2 - 1)!} \right\}$$

where  $\lambda_1 = \overline{\text{SOR/WK}} / \sigma_{\text{SOR/WK}}^2$

$$k_1 = \left[ \lambda_1 \cdot \overline{\text{SOR/WK}} \right]$$

$$\lambda_2 = \overline{\text{FH/WK}} / \sigma_{\text{FH/WK}}^2$$

$$k_2 = \left[ \lambda_2 \cdot \overline{\text{FH/WK}} \right]$$

If  $\Delta I$  is in weeks to begin with, then the calculation is simply that of Blocks 5 and 6. The mean and standard deviations of the distribution for the number of basic postflights and preflights are then calculated in Blocks 7 and 8. The mean and standard deviations of the total number of weeks in the maintenance program period are then calculated in Block 10.

Distributions for the number of preflight and basic postflight manhours in  $\Delta I$  are calculated in Block 11. The variance in this case is that of the sum of a variable number of terms and is obtained as follows.

For some variable  $Z$  defined to be:

$$Z \equiv x_1 + x_2 + \dots + x_n$$

Where  $x_i$  and  $n$  both are stochastic variables with  $x_i$  identically distributed, then  $Z$  has the probability distribution:

$$p_Z(u) = \sum_{N=1}^{\infty} p_N(n) p^{*n}(u)$$

where  $p_N(n)$  is the probability distribution for  $n$  and  $p^{*n}$  is the  $n$ th-fold convolution of  $p(x)$ , with  $E(x) = \bar{x}$  and  $\text{Var}(x) = \sigma^2$ .

Then

$$\bar{Z} = E(Z) = \bar{n} \cdot \bar{x}$$

and

$$\begin{aligned}
 \text{Var}(Z) &= \int_0^{\infty} (u - \bar{Z})^2 p_Z(u) du \\
 &= \int_0^{\infty} (u - \bar{Z})^2 \sum_n p_N(n) p^{*n}(u) du \\
 &= \sum_n p_N(n) \int_0^{\infty} (u - \bar{Z})^2 p^{*n}(u) du \\
 &= \sum_n p_N(n) E(u - \bar{Z})^2 = \sum_n p_N(n) E(u - n\bar{x} + n\bar{x} - \bar{Z})^2 \\
 &= \sum_n p_N(n) E(u - \bar{u} + a)^2
 \end{aligned}$$

where:

$$a = n\bar{x} - \bar{Z}, \quad \text{and} \quad \bar{u} = n\bar{x}$$

Since:

$$(u - \bar{u} + a)^2 = (u - \bar{u})^2 + 2a(u - \bar{u}) + a^2$$

we have:

$$\begin{aligned}
 E(u - \bar{u} + a)^2 &= E(u - \bar{u})^2 + 2a E(u - \bar{u}) + a^2 \\
 &= \text{Var}(u) + a^2
 \end{aligned}$$

Hence:

$$\begin{aligned}
 \text{Var}(Z) &= \sum_n p_N(n) \left[ \text{Var} \left( \sum_i^n x_i \right) + (n\bar{x} - \bar{Z})^2 \right] \\
 &= \sum_n p_N(n) \left[ n\sigma^2 + (n\bar{x} - \bar{Z})^2 \right]
 \end{aligned}$$

This reduces to:

$$\text{Var}(Z) = \bar{n}\sigma^2 + \sigma_n^2 \bar{x}^2$$

Applying this result in Block 11, the equations are as shown there for the variance of preflight and basic postflight manhours in  $\Delta I$ . This result is also used in Block 12 when the mean and variance of flight hours in  $\Delta I$  are computed.

At Point B in Figure 5-2 (Sheet 2), the distributions of special inspection manhours and NORM hours in  $\Delta I$  are derived.

The first step at Block 19 is to obtain the distribution  $P \Delta I_{SW}$  for the special inspection interval  $\Delta I_{SW}$  in weeks if the interval is specified in flying hours instead.

Using Erlang distributions for flight hours per week and the special inspection interval in flying hours, the distribution for the interval in weeks is given by the equation in Block 19b:

$$P_{\Delta I_{SW}}(C) = (\lambda_{SP} C)^{k_{SP}} \sum_{j=0}^{k_{FW}-1} \frac{(k_{SP}+j-1)!}{[(j!)(k_{SP}-1)! (\lambda_{FW} + \lambda_{SP} C)^{k_{SP}+j}]}$$

where  $\lambda_{SP}$ ,  $k_{SP}$ ,  $\lambda_{FW}$ , and  $k_{FW}$  are given by Block 19a:

$$\lambda_{SP} = \overline{\Delta I_{SP}}(I) / \sigma_{\Delta I_{SP}}^2(I)$$

$$k_{SP} = \lambda_{SP} \cdot \overline{\Delta I_{SP}}(I)$$

$$\lambda_{FW} = \overline{FH/WK} / \sigma_{FH/WK}^2$$

$$k_{FW} = \lambda_{FW} \cdot \overline{FH/WK}$$

The next step is to determine the distribution for the number of special inspections of Type I in  $\Delta I$ , the inspection interval, in Block 22 of Figure 5-2. This distribution is derived as follows.

$$\begin{aligned} P_{NSPC}(n) &= \Pr \{ \text{No. inspections in } \Delta I = n \} \\ &= \Pr \{ \text{No. inspections in } \Delta I < n+1 \} - \Pr \{ \text{No. inspections in } \Delta I < n \} \end{aligned}$$

The two probability distributions on the right are derived by determining the probability that the total time for  $n$  or  $n+1$  inspections exceeds  $\Delta I$ ; that is:

$$\begin{aligned} \Pr \{ \text{No. inspections in } \Delta I < n \} &= \sum_C \Pr \left\{ \sum_{I=1}^n \Delta I_{SW}(I) > C \right\} \cdot \Pr \{ \Delta I = C \} \\ &= \sum_C \left[ 1 - \Pr \left\{ \sum_{I=1}^n \Delta I_{SW}(I) \leq C \right\} \right] \Pr \{ \Delta I = C \} \end{aligned}$$

The first distribution on the right is the n-fold convolution of the distribution for  $\Delta I_{SW}(I)$  which, as above, can be assumed normal. The second distribution on the right above is obtained from  $p_{WK/\Delta}$ . Hence:

$$\Pr \{ \text{No. inspections in } \Delta I < n \} = \sum_C \left[ 1 - \eta(C; n \overline{\Delta I_{SW}}, \sqrt{n} \sigma_{\Delta I_{SW}}) \right] p_{WK/\Delta}(C)$$

Consequently, the distribution for the number of Type I special inspections in  $\Delta I$  is:

$$P_{NSPC}(n) = \sum_C \left[ \eta(C; n \overline{\Delta I_{SW}}, \sqrt{n} \sigma_{\Delta I_{SW}}) - \eta(C; (n+1) \overline{\Delta I_{SW}}, \sqrt{n+1} \sigma_{\Delta I_{SW}}) \right] \cdot p_{WK/\Delta}(C)$$

The means and variances for manhours and NORM hours for special inspections of Type I in  $\Delta I$  are calculated in Blocks 23 and 24.

After these calculations are completed for each type of special inspection, the distributions for the total manhours and NORM hours in all special inspections are calculated in Blocks 21 and 25. This completes the evaluation of the special inspections.

At Point C in Figure 5-2 (Sheet 3), the NORS hours-per-week rates for the WUC sets are summed to obtain an aircraft-level rate.

The next step is to calculate unscheduled maintenance manhours and NORM hours in  $\Delta I$ . Starting at Block 30, the expected number of unscheduled maintenance actions in  $\Delta I$  for WUC set K is calculated from the unscheduled maintenance action frequency  $N_{uma}/TM(I, K, TM)$ . The expected number and variance of manhours and NORM hours in  $\Delta I$  are given by equations similar to those used for preflight and basic postflight manhours. That is, Block 34 gives:

$$\overline{MH}_{uma}(I, K, \Delta I) = \overline{MH}/uma(K) \cdot \bar{N}_{uma}(I, K, \Delta I)$$

For the variance, the equation is somewhat simplified, since the mean and variance of the number of unscheduled maintenance actions are equal. Hence:

$$\sigma_{MH_{uma}}^2(I, K, \Delta I) = \bar{N}_{uma}(I, K, \Delta I) \left[ \sigma_{MH/uma}^2(K) + (\overline{MH}/uma(K))^2 \right]$$

In Block 37, similar equations for unscheduled NORM hours are used.

In Blocks 31 and 33, the distributions for total unscheduled manhours and NORM hours in  $\Delta I$  are calculated by summing over the WUC sets.

The aborts-per-sortie rate at the aircraft level is calculated in Block 35 as a function of time (TM) after inspection package Type I by summing the WUC set rates. Then the average rate in  $\Delta I$  is calculated in Block 38.

In Block 39, an aircraft "failures" per sortie rate is calculated by combining the abort and AIE rates. From this rate, the dependability  $D(I)$  following inspection package Type I is calculated as the probability that a "failure" does not occur in the sortie:

$$D(I) = \exp \{ - \text{FAIL}/\text{SOR}(I) \}$$

In Block 42, the distribution of total manhours in an inspection interval for consecutive inspection package Types I and J is calculated by adding the means and variances of manhours for unscheduled maintenance, special inspections, preflight and postflight inspections, and inspection package manhours.

The distribution of total NORM hours in an I, J interval is calculated similarly in Block 40. The derivation of the distribution of total NOR hours in  $\Delta I$  is somewhat more complicated in that NORS depends on the total calendar time for the interval. So, in the equation for  $\text{NOR}/\Delta (I, J)$  in Block 36, the total of weeks per  $\Delta I$  and elapsed time for the inspection package is multiplied by the NORS/WK rate for the aircraft.

The distribution for the total calendar time in the interval, calculated in Block 32, is similar in that the NORS hours accumulated during the inspection provide an additional term in the equations for CT and  $\sigma_{CT}^2$ .

In Blocks 28 and 29, the distribution for availability is calculated in a manner similar to that used in Block 19 for the special inspections. Thus:

$$P_{A_V}(a) = \frac{\lambda_C^{k_C}}{(k_C - 1)!} \sum_{j=0}^{k_N-1} \left[ \frac{(\lambda_N(1-a))^j}{(\lambda_N(1-a) + \lambda_C)^{k_C+j}} \cdot \frac{(k_C+j-1)!}{j!(k_C-1)!} \right]$$

The distribution for effectiveness, E, is easily obtained from this result, since:

$$E = A_V \cdot D(I)$$

and  $D(I)$  is not a stochastic variable. Therefore, in Block 26:

$$\begin{aligned} P_E(e, I, J) &= \Pr \{ E \leq e \} = \Pr \{ A_V \cdot D(I) \leq e \} \\ &= \Pr \{ A_V \leq e/D(I) \} = P_{A_V} \left( \frac{e}{D(I)}, I, J \right) \end{aligned}$$

At Point D in Figure 5-2 (Sheet 4), the calculations described above are completed for all I, J values and results for the maintenance program period are obtained.

In Block 43, the distribution for the total manhours in M. P. is calculated by summing the means and variances of the manhours in  $\Delta I$  over all I and J.

The derivation of the distributions for manhours per year and flight hour and for NOR/HR in the maintenance program period is complicated by the need to add in the elapsed time for NORM and NORS to obtain the total calendar time. If these totals are represented by CT/MP in Blocks 46, 47, and 48, then the distributions are obtained as follows. In Block 47:

$$P_{MH/YR}(mh) = \Pr \{MH/YR \leq mh\} = \Pr \left\{ \frac{MH/MP}{CT/MP} \leq mh \right\}$$

$$= \Pr \{MH/MP - (mh)(CT/MP) \leq 0\}$$

The mean and variance of the expression in the brackets are

$$m = \overline{MH/MP} - (mh) \overline{CT/MP}$$

$$\sigma^2 = \sigma_{MH/MP}^2 + (mh)^2 \sigma_{CT/MP}^2$$

and the result is given by the cumulative normal:

$$P_{MH/YR}(mh) = \eta(o; m, \sigma)$$

The distributions for MH/FH and NOR/HR in Blocks 46 and 48 are obtained similarly.

In Blocks 49 and 50, dependability and effectiveness of M. P. as functions of  $\Delta I$  are calculated as time averages over the maintenance program period. As the last step in the program, the maintenance program parameters are output in Block 51.

A sample input data deck listing for the effectiveness model run is shown in Figure 5-3.

```

9999
SAMPLE RUN - INPUT DATA BASED ON RESULTS FOR 11 NON-150 AIRCRAFT SAMPLE
0.00000 2.00000 3.02000 1.05200 3.03000 1.00000 0.00709
0.79000 1.92000 0.00000 2.70000 0.00000
6 2 3 4
25.00000 30.00000 35.00000 40.00000 45.00000 50.00000
1 1 2
43.20000 26.70000 0.00000 0.00000 0.00000
0.00161 0.00002 0.00000 0.00000 0.00000
0.00000 0.00000 0.00000 0.00000
0.01400 -0.00002 0.00000 0.00000
0.24410 -0.00336 0.00000 0.00000 0.00000
1.00000 1.00000 1.00000 1.00000
0.00000 0.00000 0.00744 0.12209
10
43.20000 26.70000 0.00000 0.00000 0.00000
0.02032 -0.00030 0.00000 0.00000 0.00000
0.01066 -0.00030 0.00000 0.00000 0.00000
0.09396 -0.00159 0.00000 0.00000 0.00000
0.10571 -0.00106 0.00000 0.00000 0.00000
1.00000 1.00000 1.00000 1.00000
0.01016 0.00933 0.04698 0.05203
0 10
433.90000 417.00000 219.70000 5.00000 261.30000
30.90000 39.40000 21.90000 0.33000 30.70000
0.02016 -0.00030
0.01042 -0.00030
0.01011 -0.00159
0.29232 -0.01103 0.00000 0.00000 0.00000
3.00000 3.00000 3.00000 1.00000
0.01000 0.00921 0.00906 0.14614
1.10000 0.80000 5.00000 14.50000 0.00190
3.50000 3.97000 13.30000 19.70000 0.27100
0.00000 7.70000 3.30000 5.40000 0.16000
1.70000 1.60000 0.90000 0.00000 0.00000
7.70000 0.00000 0.00000 0.00000 29.00000 2
11.30000 13.50000 0.00000 0.00000 13.00000 10.10000 2
0.00000 7.23000 0.00000 0.00000 29.00000 63.00000 0
3.50000 0.10000 0.00000 0.00000 05.70000 05.30000 0
9999

```

Figure 5-3. Sample Data — Effectiveness Model

5.2.4 OUTPUT DESCRIPTION. As a result of the evaluation process, the impact of the maintenance program alternative is described by basically two measures: effectiveness and direct organizational manhours as functions of the length of the interval,  $\Delta I$ , between consecutive inspection packages. Typically, these functions are as shown in Figure 5-4.



Figure 5-4. Typical Effectiveness Model Outputs

The solid-line curves are mean values of the functions; statistical variation in the function is indicated by dashed lines. The interval of variation of  $\Delta I$  is constrained by data variability and by maintainability characteristics of the aircraft. These functions make it possible to select a  $\Delta I$  interval that most probably maximizes effectiveness and minimizes cost within the constraints imposed.

A sample output is shown in Figure 5-5 for a run requiring six minutes on the IBM 370.

SAMPLE RUN - INPUT DATA BASED ON RESULTS FOR 11 NON-ISO AIRCRAFT SAMPLE									
		MEAN	STD DEV						
FH/WK		4.8800	2.0000						
SOR/WK		3.0200	1.0520						
LOG/WK		3.0300	1.0460						
MH/PE		1.9200	0.0						
MH/SPU		2.7400	0.0						
R		0.7900							
AIFS/SOR		0.0073							
SCHEDULED INSPECTION DATA									
I	J	MANHOURS MEAN	STD DEV	A	NORM	B	STD DEV	NO. INSP	
1	1	43.2000	26.7000	0.0	0.0	0.0	0.0	2	
2	1	43.2000	26.7000	0.0	0.0	0.0	0.0	10	
3	1	433.8999	417.0000	219.7000	5.0000	261.2998		2	
3	2	30.9000	39.4000	21.9000	0.3300	38.7000		10	
WORK UNIT CUE SET DATA									
I	K	A	UMA	B	SS	A	ABORTS	R	
1	1	0.00161	0.00002	0.00080	0.0	0.0	0.0		
	2	0.0	0.0	0.0	0.0	0.0	0.0		
	3	0.01444	-0.00002	0.00744	0.0	0.0	0.0		
	4	0.24418	-0.00336	0.12209	0.0	0.0	0.0		
	5	0.02032	-0.00010	0.01016	0.0	0.0	0.0		
	6	0.01866	-0.00030	0.00933	0.0	0.0	0.0		
	7	0.04596	-0.00159	0.04698	0.0	0.0	0.0		
	8	0.10571	-0.00182	0.05285	0.0	0.0	0.0		
	9	0.02016	-0.00010	0.01008	0.0	0.0	0.0		
	10	0.01842	-0.00010	0.00921	0.0	0.0	0.0		
	11	0.01811	-0.00159	0.00906	0.0	0.0	0.0		
3	4	0.29232	-0.01105	0.14616	0.0	0.0	0.0		

Figure 5-5. Sample Output — Effectiveness Model (Sheet 1)



K	MEAN	STD DEV	MEAN	STD DEV	NORS/WK
1	1.1000	0.8400	5.0000	14.5000	0.0019
2	3.5000	3.9700	13.3000	19.7000	0.2710
3	8.2000	7.7400	3.3000	5.4000	0.1600
4	1.7000	1.6400	2.8000	6.8000	0.0980

SPECIAL INSPECTION DATA

J	MEAN	STD DEV	MEAN	STD DEV	INTERVAL	STD DEV	KIS
1	7.7000	6.6500	0.0	0.0	50.0000	25.8000	2
2	11.3000	13.5200	0.0	0.0	13.9000	14.1000	2
3	6.8000	7.2300	0.0	0.0	29.8000	63.8000	2
4	3.5000	9.1000	0.0	0.0	25.7000	25.3000	2

INTERVAL RESULTS  
INTERVAL = 25.

WEEKS	MEAN	STD DEV
PREFLIGHT MANHOURS	31.30	18.28
BASIC POSTFLIGHT MANHOURS	36.34	33.03
SPEC. INSPECTION MANHOURS	27.66	32.38
SPEC. INSPECTION NORM	0.0	0.0
NO. OF UNSCHED. ACTIONS		
1 = 1	4.42	
1 = 2	3.43	
1 = 3	4.26	
UNSCHED. MANHOURS		
1 = 1	9.81	8.26
1 = 2	14.96	13.75
1 = 3	8.93	7.40
UNSCHED. NORM		
1 = 1	12.66	15.60
1 = 2	13.93	9.17
1 = 3	14.41	16.89
TOTAL MANHOURS		
1 = 1	168.51	57.05
1 = 2	173.66	58.10
1 = 3	558.33	420.02
1 = 3	155.33	63.88
TOTAL NORM		
1 = 1	15.94	15.64
1 = 2	17.21	16.64
1 = 3	363.47	261.99
1 = 3	47.93	43.10
EFFECTIVENESS		
1 = 1	0.98613	0.02734
1 = 2	0.98105	0.03832
1 = 3	0.71247	0.25220
1 = 3	0.95489	0.07635
DEPLNOABILITY		
1 = 1	0.99274	
1 = 2	0.99274	
1 = 3	0.99274	

INTERVAL = 30.

WEEKS	MEAN	STD DEV
PREFLIGHT MANHOURS	38.75	30.39
BASIC POSTFLIGHT MANHOURS	38.75	30.39
SPEC. INSPECTION MANHOURS	38.75	30.39
SPEC. INSPECTION NORM	0.0	0.0
NO. OF UNSCHED. ACTIONS		
1 = 1	4.80	
1 = 2	3.62	
1 = 3	5.20	
UNSCHED. MANHOURS		
1 = 1	10.90	8.87
1 = 2	15.64	14.03
1 = 3	10.92	8.19
UNSCHED. NORM		
1 = 1	13.79	16.29
1 = 2	14.64	16.64
1 = 3	18.12	21.54
TOTAL MANHOURS		
1 = 1	190.05	63.64
1 = 2	194.70	64.56
1 = 3	580.78	420.97
1 = 3	177.78	65.84

Figure 5-5. Sample Output — Effectiveness Model (Sheet 2)

TOTAL NOR					
I =	1	J =	1	17.72	16.41
I =	2	J =	1	18.57	19.74
I =	3	J =	1	392.91	262.20
I =	3	J =	2	53.95	44.34
EFFECTIVENESS					
I =	1	J =	1	0.98716	0.02455
I =	2	J =	1	0.98482	0.03034
I =	3	J =	1	0.73207	0.23455
I =	3	J =	2	0.95866	0.06848
DEPENDABILITY					
I =	1			0.99274	
I =	2			0.99274	
I =	3			0.99274	
INTERVAL = 35.					
WEEKS				MEAN	STD. DEV.
				8.64	4.59
PREFLIGHT MANHOURS				42.80	25.50
BASIC POSTFLIGHT MANHOURS				78.98	46.06
SPEC. INSPECTION MANHOURS				36.97	37.24
SPEC. INSPECTION NORM				0.0	0.0
NO. OF UNSCHED. ACTIONS					
I =	1			5.01	
I =	2			4.18	
I =	3			6.11	
UNSCHED. MANHOURS					
I =	1			11.69	5.38
I =	2			18.14	15.14
I =	3			12.81	8.86
UNSCHED. NORM					
I =	1			14.45	16.69
I =	2			10.73	20.83
I =	3			21.42	23.55
TOTAL MANHOURS					
I =	1	J =	1	211.41	70.42
I =	2	J =	1	217.88	71.41
I =	3	J =	1	603.24	422.03
I =	3	J =	2	200.24	76.08
TOTAL NOR					
I =	1	J =	1	19.02	16.85
I =	2	J =	1	21.31	20.96
I =	3	J =	1	421.95	262.37
I =	3	J =	2	59.56	45.36
EFFECTIVENESS					
I =	1	J =	1	0.98421	0.02171
I =	2	J =	1	0.98674	0.02579
I =	3	J =	1	0.74692	0.21913
I =	3	J =	2	0.96216	0.06136
DEPENDABILITY					
I =	1			0.99274	
I =	2			0.99274	
I =	3			0.99274	
INTERVAL = 40.					
WEEKS				MEAN	STD. DEV.
				9.87	5.02
PREFLIGHT MANHOURS				87.25	32.98
BASIC POSTFLIGHT MANHOURS				87.25	32.98
SPEC. INSPECTION MANHOURS				40.76	38.86
SPEC. INSPECTION NORM					
NO. OF UNSCHED. ACTIONS					
I =	1			5.54	
I =	2			4.77	
I =	3			6.98	
UNSCHED. MANHOURS					
I =	1			13.03	9.95
I =	2			20.76	16.19
I =	3			14.64	9.48
UNSCHED. NORM					
I =	1			16.01	17.59
I =	2			19.12	22.27
I =	3			24.48	25.17
TOTAL MANHOURS					
I =	1	J =	1	231.39	77.35
I =	2	J =	1	241.13	78.19
I =	3	J =	1	624.71	423.26
I =	3	J =	2	222.71	82.54

Figure 5-5. Sample Output - Effectiveness Model (Sheet 3)

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GENERAL DYNAMICS SAN DIEGO CALIF CONVAIR AEROSPACE DIV

F/G 1/5

F-106 SCHEDULED MAINTENANCE STUDY. USER'S MANUAL, (U)

SEP 72 G WANG, R S GROTE, J R COOPER

F41608-71-D-1383

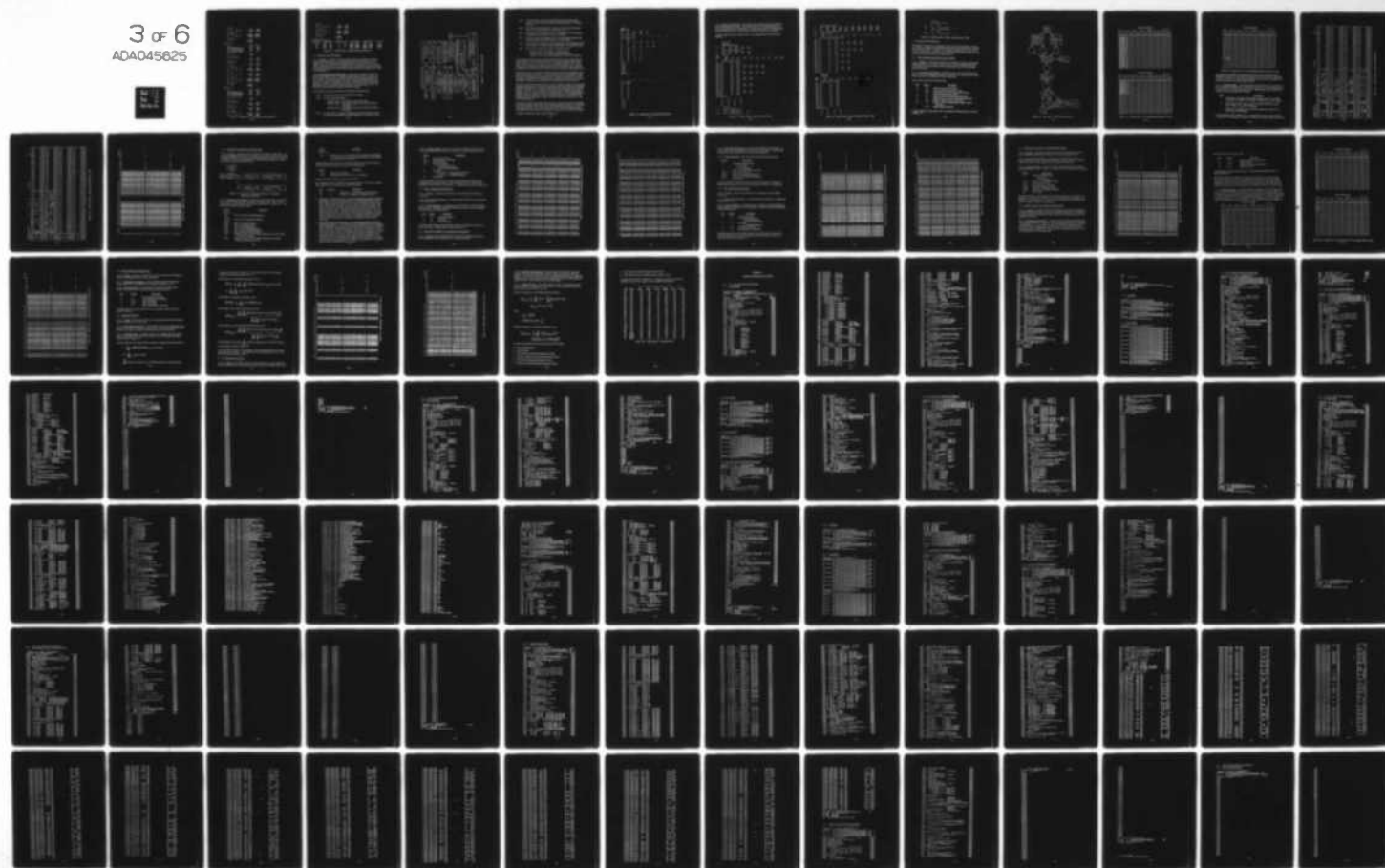
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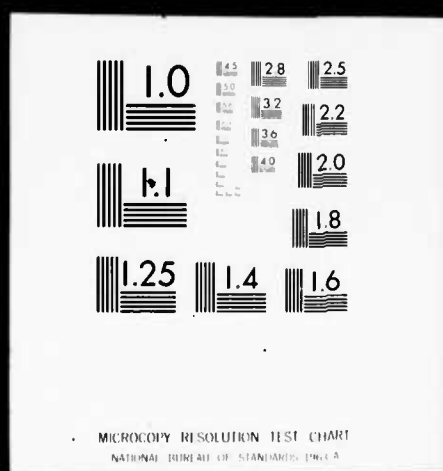
3 of 6

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3 OF 6

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TOTAL NUM					
I =	1	L =	1	21.26	17.79
I =	2	L =	1	24.36	22.43
I =	3	L =	1	450.75	262.52
I =	3	L =	2	64.92	46.24
EFFECTIVENESS					
I =	1	L =	1	0.98866	0.02026
I =	2	L =	1	0.98686	0.01229
I =	3	L =	1	0.75858	0.24190
I =	3	L =	2	0.96539	0.05524
DEPENDABILITY					
I =	1			0.99274	
I =	2			0.99274	
I =	3			0.99274	

INTERVAL = 45.

WEEKS				MEAN	STD DEV
				11.11	5.64
PREFLIGHT MANHOURS				53.89	38.66
BASIC POSTFLIGHT MANHOURS				97.35	38.66
SPEC. INSPECTION MANHOURS				46.62	41.84
NO. OF UNSCHED. ACTIONS				0.0	0.0
I =	1			6.24	
I =	2			5.37	
I =	3			7.85	
UNSCHED. MANHOURS					
I =	1			14.62	10.53
I =	2			23.35	17.17
I =	3			16.47	10.05
UNSCHED. NORM					
I =	1			18.02	18.68
I =	2			21.51	23.62
I =	3			27.54	26.70
TOTAL MANHOURS					
I =	1	L =	1	255.69	84.36
I =	2	L =	1	264.42	62.44
I =	3	L =	1	648.24	424.60
I =	3	L =	2	245.24	86.14
TOTAL NUM					
I =	1	L =	1	23.92	18.92
I =	2	L =	1	27.40	23.81
I =	3	L =	1	474.54	262.68
I =	3	L =	2	70.30	47.11
EFFECTIVENESS					
I =	1	L =	1	0.98865	0.01524
I =	2	L =	1	0.98706	0.02445
I =	3	L =	1	0.76867	0.19273
I =	3	L =	2	0.96725	0.05240
DEPENDABILITY					
I =	1			0.99274	
I =	2			0.99274	
I =	3			0.99274	

INTERVAL = 50.

WEEKS				MEAN	STD DEV
				12.34	6.27
PREFLIGHT MANHOURS				59.23	38.18
BASIC POSTFLIGHT MANHOURS				107.54	38.18
SPEC. INSPECTION MANHOURS				51.52	44.06
NO. OF UNSCHED. ACTIONS				0.0	0.0
I =	1			6.93	
I =	2			5.97	
I =	3			8.73	
UNSCHED. MANHOURS					
I =	1			16.21	11.07
I =	2			25.95	18.10
I =	3			18.30	10.59
UNSCHED. NORM					
I =	1			20.04	19.71
I =	2			23.90	24.90
I =	3			30.60	28.14
TOTAL MANHOURS					
I =	1	L =	1	278.01	41.41
I =	2	L =	1	287.74	92.53
I =	3	L =	1	670.80	424.05
I =	3	L =	2	267.80	95.84

Figure 5-5. Sample Output — Effectiveness Model (Sheet 4)

TOTAL NUM									
I =	J =	I =	J =	I =	J =	I =	J =	I =	J =
1	1	1	1	26.59	19.99				
1	2	1	2	30.45	23.12				
1	3	1	3	508.34	262.83				
1	4	1	4	75.67	47.97				
EFFECTIVENESS									
I =	J =	I =	J =	I =	J =	I =	J =	I =	J =
1	1	1	1	0.98925	0.01022				
1	2	1	2	0.98737	0.02348				
1	3	1	3	0.77080	0.18259				
1	4	1	4	0.96882	0.04563				
DEPENDABILITY									
I =	J =	I =	J =	I =	J =	I =	J =	I =	J =
1	1	1	1	0.99274					
1	2	1	2	0.99274					
1	3	1	3	0.99274					
1	4	1	4	0.99274					
MAINTENANCE PROGRAM RESULTS									
INTERVAL (FLIGHT HOURS)	MAN HOURS/YEAR MEAN	STD DEV	MAN HOURS/FLIGHT HOUR MEAN	STD DEV	NUM HOURS/HOUR MEAN	STD DEV	EFFECTIVENESS MEAN	STD DEV	DEPENDABILITY
25.	1819.	463.	8.	2.	0.0812	0.0297	0.9462	0.0414	0.9927
30.	1704.	410.	7.	2.	0.0762	0.0273	0.9431	0.0369	0.9927
35.	1647.	381.	7.	2.	0.0726	0.0258	0.9356	0.0344	0.9927
40.	1569.	359.	7.	2.	0.0677	0.0248	0.9590	0.0304	0.9927
45.	1524.	342.	7.	1.	0.0672	0.0239	0.9608	0.0292	0.9927
50.	1488.	327.	6.	1.	0.0649	0.0229	0.9622	0.0275	0.9927

### 5.3 NETWORK ANALYSIS MODEL

**5.3.2 INPUT DATA AND PROCEDURES.** The flow chart in Figure 5-6 describes the network analysis process. Three types of input data are read from cards. The first consists of the empirical look-phase manhours and inspection package NORM hours in Step 1 of the block diagram. This data is input for existing inspection packages only. In Step 2, the branch data is read in. This data includes the probability distributions for branch manhours and the span time to manhour ratios, FHR. The third set of input data in Step 3 defines the network structure.

- |       |  |
|-------|--|
| Set 1 | One title card (80 characters printed as a heading)  |
| Set 2 | One card with three integers:<br><br>Columns 1 and 2 – The number of network branches<br>Columns 3 and 4 – The number of points in the empirical NORM distribution<br>Columns 5 and 6 – The number of points in the empirical manhour distribution |
| Set 3 | As many cards as required to specify the NORM and probability values for all points in the empirical NORM distribution, 10 columns per value.  |

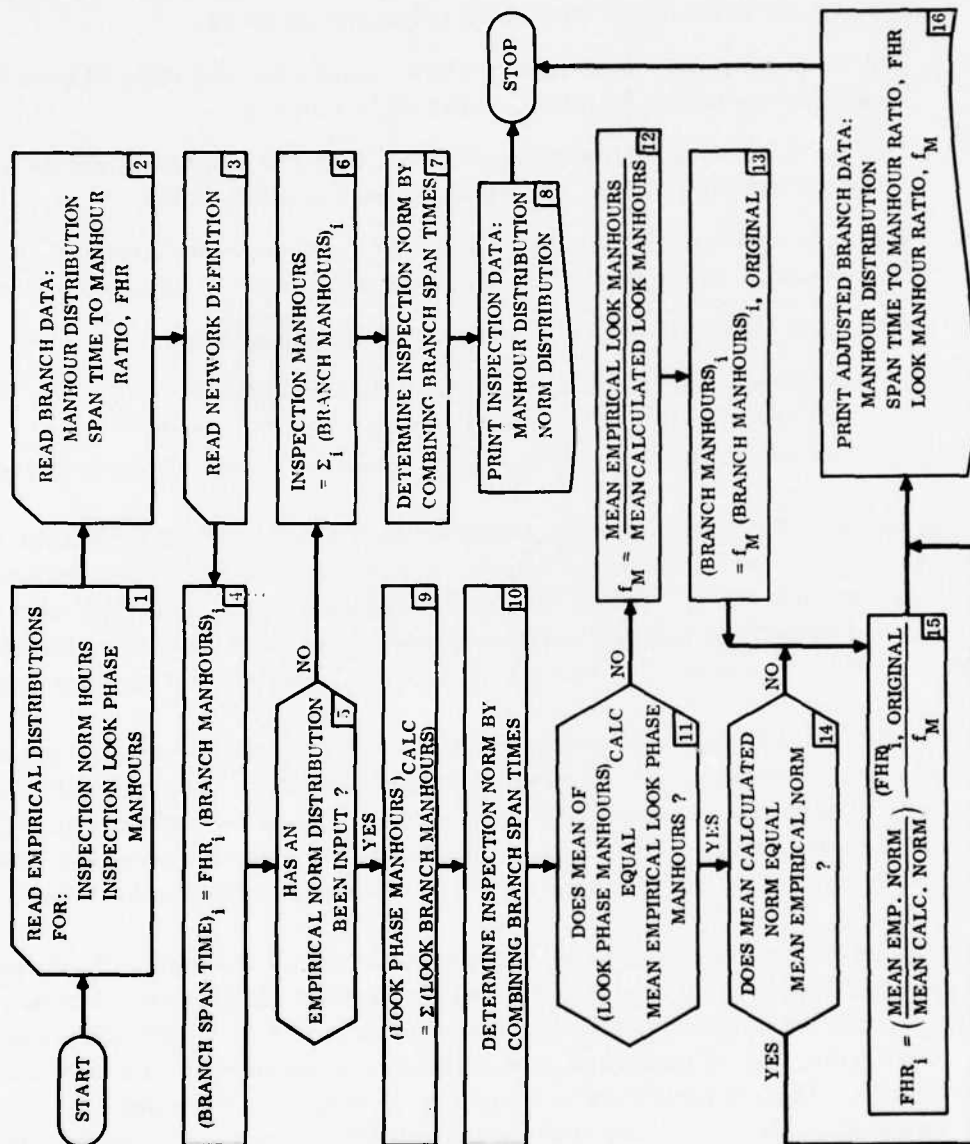


Figure 5-6. Network Analysis Model

- Set 4 As many cards as required to specify the manhours and probability values for all points in the empirical manhour distribution, 10 columns per value.
- Set 5 One card for each 40 branches or lines, with a 0 for each look branch and a 2 for each repair branch, 2 columns per value.
- Set 6 One card for each 8 branches or lines, containing the ratio of span time to manhours for each branch, fields of 10 columns.
- Set 7 One card for each 40 branches or lines, with the number of points used to define branch manhour distribution, in 2-column fields.
- Set 8 As many cards as required to specify the manhours and probability values for all points in the branch manhour distributions, 10 columns per value.
- Set 9 One card for each step in the network reduction process:
  - Columns 1 and 2 - The number of the first branch.
  - Columns 3 and 4 - The number of the second branch.
  - Column 6 - A zero for parallel branches; a 1 for series branches.

If an existing inspection package is being evaluated to scale inspection task manhours and man times, a "Yes" exit is taken at Step 5. If previously adjusted data is being used to predict flowtime and manhours for a new inspection package, a "No" exit is taken at Step 5 and inspection package manhours are accumulated at Step 6, followed by application of NAM to reduce the network at Step 7 to calculate the package flow time.

The reduction of sets of branches to equivalent branches involves the application of two different mathematical techniques. For two branches in series, the probability distribution for the total span time is the distribution for the sum of the span times. This distribution is obtained as the convolution of the individual distributions. For branches in parallel, the span time is the distribution for the maximum over the branches.

Inspection task manhours and span times are scaled in Steps 9 through 15 by calculating inspection package manhours in Step 9, reducing the network by using NAM to calculate the flow time in Step 10, and comparing calculated manhours with empirical manhours in Step 11. The ratio,  $f_M$ , of empirical look manhours to calculated look manhours is adjusted in Step 12. Branch manhours are adjusted in Step 13. When package manhour equality is achieved in Step 11, calculated package NORM hours are compared with empirically derived NORM hours in Step 14 and the spantime-to-manhour ratio, FHR, is calculated in Step 15.

When equality between empirically derived inspection package flow time and calculated flow time is achieved, the analysis of the inspection package is complete. At this point, NAM outputs the final values of the ratios  $f_M$  and FHR so that the adjusted values of task manhours and span times are available for evaluation of a new inspection package.

A listing of a sample data deck is shown in Figure 5-7.



```

9999
SAMPLE CASE 1
11 5 5
0. 3. 4. 4.2 6.
0. .1 .3 4.2 1.
0. 3. 4. 4.2 6.
0. .1 .5 .8 1.
0 2 0 2 0 2 0 2 0 2 0
1. 1. 1. 1. 1.
.33 1. 1.
2 6.2 6 2 4 2 4 2 4 2
0. .5
0. 1.
0. .2 .4 .4 .8 1.
0. .2 .4 .6 .8 1.
0. 1.
0. 1.
0. .2 .5 .9 1.4 2.0
0. .2 .4 .6 .8 1.
0. 1.4
0. 1.
0. .1 .2 .4
0. .2 .4 1.
0. .8
0. 1.
0. .5 .7 .9
0. .2 .6 1.
0. 1.5
0. 1.
0. .2
0. .4 .5
0. .8 1.
0. 1.
0. 1.
3 4 1
7 8 1
2 7 1
2 3 0
1 2 1
5 6 1
9 10 1
9 9 0
1 5 1
1 1 1
SAMPLE CASE 2
8
1. 1. 1. 1. 1. 1.
2 2 2 2 2 2 2 2
0. 1.5
0. 1.
0. 3.
0. 1.
0. 4.
0. 1.
0. 5.
0. 1.
0. 6.
0. 1.
0. 3.5
0. 1.
0. 2.
0. 1.
0. 7.
0. 1.
2 3 0
4 5 0
2 4 1
2 7 0
1 2 1
1 6 1
1 8 0
9999

```

Figure 5-7. Sample Data — Network Analysis Model

**5.3.3 OUTPUT DESCRIPTION.** Output includes the calculated inspection NORM and manhour distributions, the mean and standard deviations of these distributions, and the corresponding empirical distributions. Primary output consists of revised branch manhour distributions and revised span-time-to-manhour ratios for all branches.

A sample output is shown in Figure 5-8 for a run requiring about one minute on the IBM 370.

```

SAMPLE CASE 1
INPUT DATA
EMPIRICAL INSPECTION NORM
T =      0.0      3.00      4.00      4.20      6.00
P =      0.0      0.10      0.50      0.80      1.00
EMPIRICAL INSPECTION MANHOURS
T =      0.0      3.00      4.00      4.20      6.00
P =      0.0      0.10      0.50      0.80      1.00
BRANCH DATA
NBR =      11
LKF =      0
FHR =      1.00      1.00      1.00      1.00      0.50      1.00      0.75      1.00      0.33      1.00
BRANCH MANHOURS AND SPAN TIMES
TMHI 1,J) =      0.0      0.50
PMHI 1,J) =      0.0      1.00
TMHI 2,J) =      0.0      0.20      0.40      0.60      0.80      1.00
PMHI 2,J) =      0.0      0.20      0.40      0.60      0.80      1.00
TMHI 3,J) =      0.0      1.00
PMHI 3,J) =      0.0      1.00
TMHI 4,J) =      0.0      0.20      0.50      0.90      1.40      2.00
PMHI 4,J) =      0.0      0.20      0.40      0.60      0.80      1.00
TMHI 5,J) =      0.0      1.20
PMHI 5,J) =      0.0      1.00
TMHI 6,J) =      0.0      0.10      0.20      0.40
PMHI 6,J) =      0.0      0.20      0.80      1.00
TMHI 7,J) =      0.0      0.80
PMHI 7,J) =      0.0      1.00
TMHI 8,J) =      0.0      0.50      0.70      0.90
PMHI 8,J) =      0.0      0.20      0.60      1.00
TMHI 9,J) =      0.0      1.50
PMHI 9,J) =      0.0      1.00
TMHI 10,J) =      0.0      0.30      0.40      0.50
PMHI 10,J) =      0.0      0.40      0.80      1.00
TMHI 11,J) =      0.0      0.80
PMHI 11,J) =      0.0      1.00
NETWORK DEFINITION
1 2 3 4 5 6 7 8 9 10 11
1 2 3 4 5 6 7 8 9 10 11
1 2 3 4 5 6 7 8 9 10 11
1 2 3 4 5 6 7 8 9 10 11
OUTPUT DATA
EMPIRICAL INSPECTION NORM
MEAN =      4.36      STANDARD DEVIATION =      0.88
EMPIRICAL INSPECTION MANHOURS
MEAN =      4.36      STANDARD DEVIATION =      0.88

```

Figure 5-8. Sample Output - Network Analysis Model

CALCULATED INSPECTION NORM

T =	0:29	2:33	2:28	2:38	2:52	2:78	2:88	3:28	3:18	3:38
P =	0:21	0:22	0:23	0:24	0:25	0:26	0:27	0:28	0:29	0:30

MEAN = 4.51 STANDARD DEVIATION = 0.45

ADJUSTED BRANCH DATA

FM =	0.75									
FHR =	1.29	1.00	1.29	1.00	0.64	1.00	0.97	1.30	0.42	1.00

ADJUSTED BRANCH MANHOURS AND SPAN TIMES

TMH( 1,J) =	0.0	0.38								
PMH( 1,J) =	0.0	1.00								
TMH( 2,J) =	0.0	0.20	0.40	0.60	0.80	1.00				
PMH( 2,J) =	0.0	0.20	0.40	0.60	0.80	1.00				
TMH( 3,J) =	0.0	0.75								
PMH( 3,J) =	0.0	1.00								
TMH( 4,J) =	0.0	0.20	0.50	0.90	1.40	2.00				
PMH( 4,J) =	0.0	0.20	0.40	0.60	0.80	1.00				
TMH( 5,J) =	0.0	0.90								
PMH( 5,J) =	0.0	1.00								
TMH( 6,J) =	0.0	0.10	0.20	0.40						
PMH( 6,J) =	0.0	0.20	0.80	1.00						
TMH( 7,J) =	0.0	0.60								
PMH( 7,J) =	0.0	1.00								
TMH( 8,J) =	0.0	0.50	0.70	0.90						
PMH( 8,J) =	0.0	0.20	0.60	1.00						
TMH( 9,J) =	0.0	1.13								
PMH( 9,J) =	0.0	1.00								
TMH( 10,J) =	0.0	0.30	0.40	0.50						
PMH( 10,J) =	0.0	0.40	0.80	1.00						
TMH( 11,J) =	0.0	0.60								
PMH( 11,J) =	0.0	1.00								

SAMPLE CASE 2

INPUT DATA

BRANCH DATA

NBR =	8	6	0	0	0	0	0	0	0
LRFX =	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FHR =	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

BRANCH MANHOURS AND SPAN TIMES

TMH( 1,J) =	0.0	1.50							
PMH( 1,J) =	0.0	1.00							
TMH( 2,J) =	0.0	3.00							
PMH( 2,J) =	0.0	1.00							
TMH( 3,J) =	0.0	4.00							
PMH( 3,J) =	0.0	1.00							
TMH( 4,J) =	0.0	5.00							
PMH( 4,J) =	0.0	1.00							
TMH( 5,J) =	0.0	6.00							
PMH( 5,J) =	0.0	1.00							
TMH( 6,J) =	0.0	3.50							
PMH( 6,J) =	0.0	1.00							
TMH( 7,J) =	0.0	2.00							
PMH( 7,J) =	0.0	1.00							
TMH( 8,J) =	0.0	7.00							
PMH( 8,J) =	0.0	1.00							

NETWORK DEFINITION

1	2	3	4
5	6	7	8
9	10	11	12
13	14	15	16
17	18	19	20

Figure 5-8. Sample Output - Network Analysis Model, Contd

```

      OUTPUT DATA
      CALCULATED INSPECTION NORM
      T = 0.0      15.00
      P = 0.0      1.00
      MEAN = 15.00      STANDARD DEVIATION = 0.0
      CALCULATED INSPECTION MANHOURS
      T = 0.0      32.00
      P = 0.0      1.00
      MEAN = 32.00      STANDARD DEVIATION = 0.0

```

Figure 5-8. Sample Output - Network Analysis Model, Contd

#### 5.4 MANHOUR AND NORM DATA

The objective of this task is to generate for each work unit code (WUC) set, the mean and variance of manhours per unscheduled maintenance action and NORM per unscheduled maintenance action. In addition, the programs compute the mean value of span time for a repair action on each WUC set. The logic flow is shown in Figure 5-9, and the individual programs are listed in Paragraph 6.10.

##### 5.4.1 SUM UNSCHEDULED MAINTENANCE ACTIONS

5.4.1.1 Purpose. The purpose of this task is to compute the number of unscheduled maintenance actions, the number of repair actions in hourly postflight inspections, and the number of repair actions in periodic inspections on each WUC by how-mal-function code (HMC).

5.4.1.2 Input Data and Procedures. The input consists of the sorted data bank tape and a deck of cards defining the isochronal aircraft group, the when-discovered codes (WDC), and the hourly postflight and periodic inspections.

The card data deck has the following format.

<u>Card</u>	<u>Column</u>	<u>Description</u>
a	3-5	Number of Isochronal Aircraft
b	3-10	Serial Number of Isochronal Aircraft
	13-15	Starting Week Number of Isochronal Inspection
c	5	When-Discovered Codes (WDC)
d	1-3	Number of WDC for Unscheduled Inspections
e	1-3	Position of Each WDC for Unscheduled Inspections
f	1-3	Number of Support General Inspections
g	1-3	Position of WDC Corresponding to Support General Inspection
	6-10	Support General Inspection

A sample input deck, that used for the F-106 Scheduled Maintenance Study, is shown in Figure 5-10.

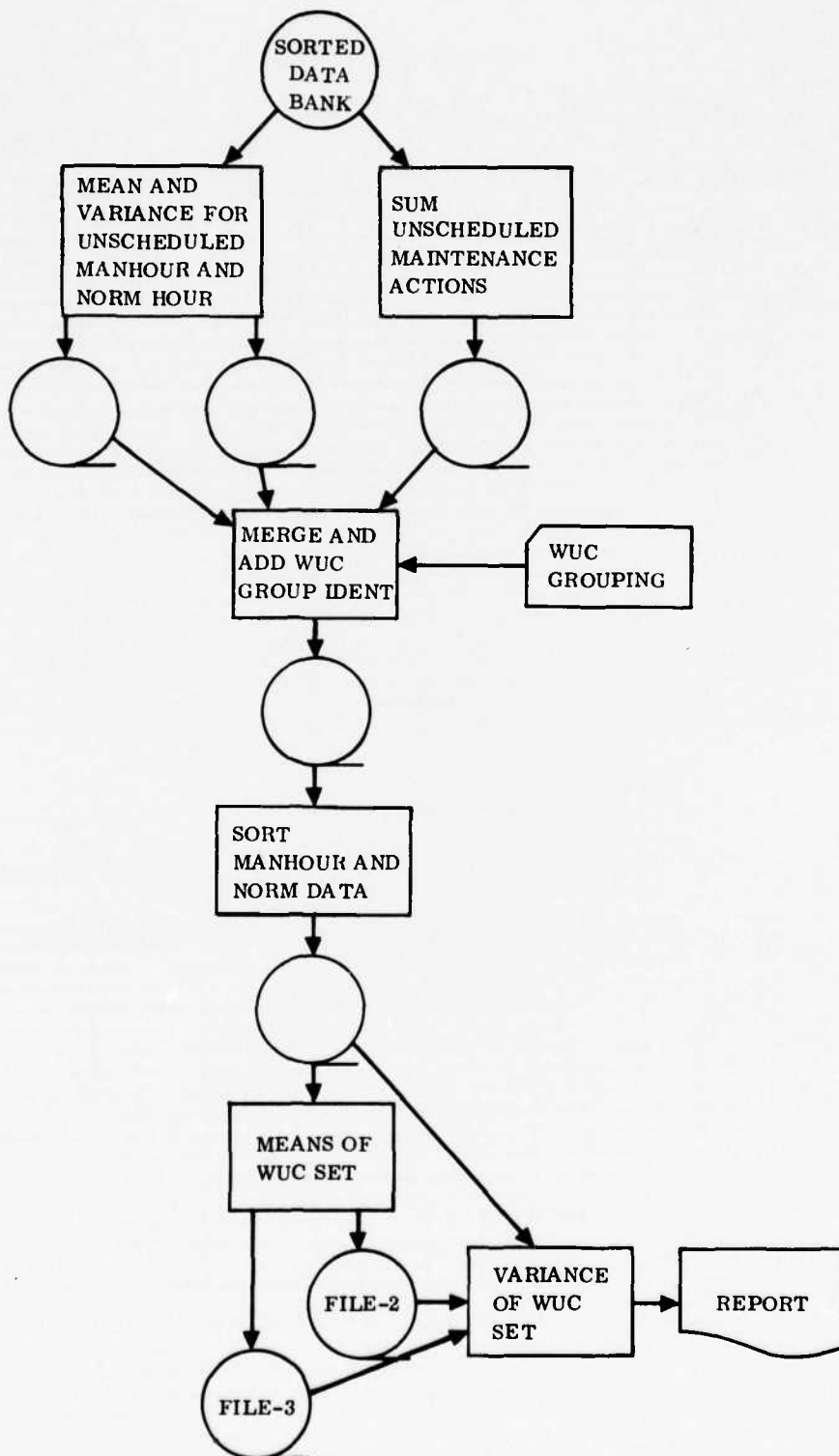


Figure 5-9. Logic Flow - Manhour and NORM Data

**80 COLUMN GENERAL PURPOSE FORM**

JOB TITLE \_\_\_\_\_ ENGINEER \_\_\_\_\_ PAGE \_\_\_\_\_ OF \_\_\_\_\_  
 JOB NO. \_\_\_\_\_ AND TWO-WAY \_\_\_\_\_ FUNCTION \_\_\_\_\_ ANALYST \_\_\_\_\_ DATE \_\_\_\_\_

W-1	W-2	W-3	W-4	W-5	W-6	W-7	W-8
34							
57000234	331						
57000237	331						
57000243	324						
57000244	331						
57002545	331						
58000274	324						
58000991	331						
59000003	331						
59000003	331						
59000005	331						
59000006	331						
59000010	331						
59000012	331						
59000015	331						
59000018	331						
59000019	331						
59000026	331						
59000030	331						
59000054	324						
59000057	324						
59000058	324						
59000059	324						
59000104	331						
59000105	331						

21000 (REV. 11-82)

**80 COLUMN GENERAL PURPOSE FORM**

JOB TITLE \_\_\_\_\_ ENGINEER \_\_\_\_\_ PAGE \_\_\_\_\_ OF \_\_\_\_\_  
 JOB NO. \_\_\_\_\_ AND TWO-WAY \_\_\_\_\_ FUNCTION \_\_\_\_\_ ANALYST \_\_\_\_\_ DATE \_\_\_\_\_

W-1	W-2	W-3	W-4	W-5	W-6	W-7	W-8
59000108	324						
59000110	324						
59000119	324						
59000141	324						
59000143	324						
59000144	324						
59000145	324						
59000147	324						
59000151	324						
59000152	324						
A							
B							
C							
D							
E							
F							
G							
H							
I							
J							
K							
M							
N							
P							
Q							
R							

21000 (REV. 11-82)

Figure 5-10. Sample Input - Sum Unscheduled Maintenance Actions

[illegible]

The program accumulates the maintenance actions from Type 4 data bank records (Columns 26 through 28) for both aircraft subsets and each WUC and HMC combination, and then writes the total of unscheduled maintenance actions and hourly postflight and periodic inspections on an output magnetic tape file.

Field

- 1 The number of unscheduled maintenance actions on each WUC, by how-malfunction code (HMC). This number is denoted by  $N_{uma}(WUC, HMC)$ .
- 2 The number of repair actions in hourly postflight inspections on each WUC, by HMC:  $(N_{rep}(WUC, HMC))_{HPO}$
- 3 The number of repair actions in periodic inspections on each WUC, by HMC:  $(N_{rep}(WUC, HMC))_{PE}$

**5-33**

RECORDS AND WORK AREAS		DATE	REVISED DATE	BY	USED BY PROGRAMS	SECTION
OUTPUT - SUM UNSCHEDULED MAINTENANCE ACTIONS						
RECORD NAME	FILE NO.	BLOCK	DATE			
FIELD NAME	W.U.C	HMC	UNSCHEDULED MAINTENANCE ACTIONS	REPAIR ACTIONS	REPAIR ACTIONS	REPAIR ACTIONS
CHARACTER POSITION	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20
OUTPUT - MEAN AND VARIANCE OF UNSCHEDULED MANHOUE						
RECORD NAME	FILE NO.	BLOCK	DATE			
FIELD NAME	W.U.C	HMC	MEAN MANHOUE/MA	VARIANCE MANHOUE/MA	VARIANCE MANHOUE/MA	VARIANCE MANHOUE/MA
CHARACTER POSITION	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20
OUTPUT - MEAN AND VARIANCE OF UNSCHEDULED NORM HOUE						
RECORD NAME	FILE NO.	BLOCK	DATE			
FIELD NAME	W.U.C	HMC	MEAN NORM/MA	VARIANCE NORM/MA	VARIANCE NORM/MA	VARIANCE NORM/MA
CHARACTER POSITION	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20
OUTPUT - MERGE AND ADD WUC GROUP IDENTIFIED						
RECORD NAME	FILE NO.	BLOCK	DATE			
FIELD NAME	W.U.C	HMC	VARIABLE -1	VARIABLE -2	VARIABLE -3	VARIABLE -3
CHARACTER POSITION	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20

Figure 5-11. Record Layouts - Manhour and NORM Data







## 5.4.2 UNSCHEDULED MANHOUR AND NORM HOUR

**5.4.2.1 Purpose.** The purpose of this program is to generate two output files. One file contains unscheduled manhour-per-maintenance-action data, and the other contains unscheduled NORM hour per maintenance action data (Figures 5-9 and 5-13). Input to this program consists of sorted data bank, isochronal aircraft definition, a selected list of WUCs, and inspection criteria data.

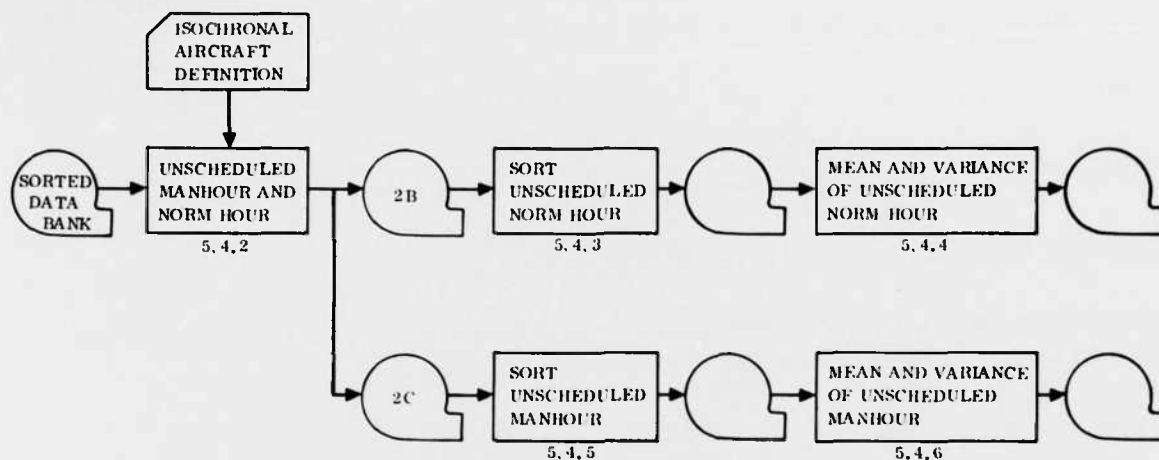


Figure 5-13. Logic Flow - Mean and Variance for Unscheduled Manhour and NORM Hour

**5.4.2.2 Input Data and Procedures.** There are two types of input data: tape and card deck. Tape data consists of data bank sorted in the order of WUC, HMC, aircraft serial number, and week number. For the tape record layout, see Figure 4-4. The data card deck has the following formats.

<u>Column</u>	<u>Description</u>
Card No. 1:	
1-5	WUC for Hourly Post Flight Inspection
6-10	WUC for MA-1 Scheduled Calibration
11-15	
16-20	
21-25	
26-30	WUC for IRAN Depot Visit
31-35	WUC for Preflight Inspection
36-40	WUC for Basic Postflight Inspection
41-45	WUC for Special Hourly Postflight
46-47	Minimum number of weeks between inspections for the four WUCs in Columns 1 through 20
48-49	Minimum number of weeks between inspections for Periodic Inspection and IRAN Depot Visit

<u>Column</u>	<u>Description</u>
Card No. 2:	
3-5	Number of Isochronal Aircraft (Current program is dimensioned for a maximum of 36 isochronal aircraft, which may be increased by minor program modification.)

The following cards describe the isochronal aircraft fleet, one card per isochronal aircraft, and the serial numbers are sorted in ascending order.

<u>Column</u>	<u>Description</u>
3-10	Aircraft Serial Number
13-15	Starting Week Number for Isochronal Inspection

Sample input data deck listing is given in Figure 4-18.

The unscheduled manhour and NORM hour program (Figure 4-17) produces two output files, File 2B and 2C, containing the following information.

<u>File</u>	<u>Data Type</u>	<u>Description</u>
2B	3	NORM Hours - Unscheduled Maintenance Actions
2C	1	Manhours - Unscheduled Maintenance Actions

- a. Procedures to Generate Manhours - Unscheduled Maintenance Action (for File 2C, Data Type 1). The manhour distributions are calculated separately for repair actions and unscheduled maintenance actions by accumulating the number of man-hours charged against a specific WUC and a specific HMC for successive weeks until a week is encountered with a nonzero number of maintenance actions. The number of repair actions or unscheduled actions against the same WUC is accumulated at the same time. This data is obtained from Record Type 4. The ratio of these totals provides one observation of manhours-per-maintenance action for this WUC malfunction. Each occurrence of a maintenance action on an aircraft in the bank for the specific WUC malfunction combination provides another observation.
- b. Procedures to Generate NORM Hours - Unscheduled Maintenance Actions (for File 2B, Data Types 3). The distribution for unscheduled NORM hours is obtained in the same fashion, except that only unscheduled maintenance actions are included. Again, NORM hours and maintenance action totals are accumulated from week to week until a nonzero number of maintenance action fields is encountered. The ratio of the two totals then provides one observation of unscheduled NORM hours per maintenance action for the specific WUC. Since the type of malfunction is not recorded in AFM 65-110 (through which NORM hours are recorded), it is not possible to calculate this distribution for a specific type of malfunction. The data for this calculation is obtained from Record Type 3.

5.4.2.3 Output Description. The output consists of two tape files (2B and 2C) with 20-character data records blocked 90 to a tape record, with the following formats.

<u>Column</u>	<u>Description</u>
1-5	Work Unit Code (WUC)
6-8	How-Malfunction Code (HMC)
10-15	Observation Data
17	Isochronal Indicator = 1 Isochronal Inspection = 2 Non-Isochronal Inspection
19	Data Type: For File 2B = 3 Unscheduled NORM Hours For File 2C = 1 Unscheduled Manhour
20	Record Mark

On a recent IBM 370 run for an F-106 fleet of 150 aircraft and 2201 WUCs, total computer time was about 13 minutes. Records totaling 214,651 and 243,801 were generated for Files 2B and 2C, respectively. A sample output is shown in Figure 5-14.

#### 5.4.3 SORT UNSCHEDULED NORM HOUR

5.4.3.1 Purpose. The purpose of this task is to sort output File 2B for further processing.

5.4.3.2 Input Data and Procedures. The input consists of tape File 2B, as described in Paragraph 5.4.2.3.

5.4.3.3 Output Description. An output tape, 20 characters per record with a blocking factor of 90, consisting of unscheduled NORM hour records is sorted according to the following keys in ascending order.

<u>Key</u>	<u>Column</u>	<u>Description</u>
1	17	Isochronal Indicator
2	19	Data Type
3	1-5	Work Unit Code

It took about three minutes on the IBM 370 to sort 214,651 records for the 150-aircraft F-106 fleet. A sample output is shown in Figure 5-15.

#### 5.4.4 MEAN AND VARIANCE OF UNSCHEDULED NORM HOUR

5.4.4.1 Purpose. This program generates an output file containing mean and variance unscheduled NORM hour data by WUC, isochronal subset type.

**Figure 5-14. Sample Output - Unscheduled Manhour and NORM Hour**



1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159	160	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200	201	202	203	204	205	206	207	208	209	210	211	212	213	214	215	216	217	218	219	220	221	222	223	224	225	226	227	228	229	230	231	232	233	234	235	236	237	238	239	240	241	242	243	244	245	246	247	248	249	250	251	252	253	254	255	256	257	258	259	260	261	262	263	264	265	266	267	268	269	270	271	272	273	274	275	276	277	278	279	280	281	282	283	284	285	286	287	288	289	290	291	292	293	294	295	296	297	298	299	300	301	302	303	304	305	306	307	308	309	310	311	312	313	314	315	316	317	318	319	320	321	322	323	324	325	326	327	328	329	330	331	332	333	334	335	336	337	338	339	340	341	342	343	344	345	346	347	348	349	350	351	352	353	354	355	356	357	358	359	360	361	362	363	364	365	366	367	368	369	370	371	372	373	374	375	376	377	378	379	380	381	382	383	384	385	386	387	388	389	390	391	392	393	394	395	396	397	398	399	400	401	402	403	404	405	406	407	408	409	410	411	412	413	414	415	416	417	418	419	420	421	422	423	424	425	426	427	428	429	430	431	432	433	434	435	436	437	438	439	440	441	442	443	444	445	446	447	448	449	450	451	452	453	454	455	456	457	458	459	460	461	462	463	464	465	466	467	468	469	470	471	472	473	474	475	476	477	478	479	480	481	482	483	484	485	486	487	488	489	490	491	492	493	494	495	496	497	498	499	500	501	502	503	504	505	506	507	508	509	510	511	512	513	514	515	516	517	518	519	520	521	522	523	524	5
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5.4.4.2 Input Data and Procedures. No input data is needed for this program. For a given WUC, data of unscheduled NORM hour will be accumulated. Values of mean and variance are then computed and are written on the output file.

5.4.4.3 Output Description. The output file has the following record format.

<u>Column</u>	<u>Description</u>
1	Isochronal Inspection Type = 1 Isochronal = 2 Non-Isochronal
11	Set to 3, for Unscheduled Norm Hour
13-17	Work Unit Code (WUC)
23-30	Mean for Unscheduled NORM Hour
32-39	Variance of Unscheduled NORM Hour
50	Record Mark

It took five minutes on the IBM 370 to process 2872 records for the F-106 fleet. A sample output and output format are shown in Figures 5-16 and 5-11, respectively.

#### 5.4.5 SORT UNSCHEDULED MANHOUR

5.4.5.1 Purpose. The purpose of this task is to sort output File 2C for further processing.

5.4.5.2 Input Data and Procedures. The input consists of tape File 2C, as described in Paragraph 5.4.2.3.

5.4.5.3 Output Description. An output tape file, consisting of unscheduled manhours charged against a specific WUC and specific HMC, is sorted according to the following keys in ascending order.

<u>Key</u>	<u>Column</u>	<u>Description</u>
1	17	Isochronal Indicator = 1 Isochronal Subset = 2 Non-Isochronal Subset
2	19	Data Type = 1 Unscheduled Manhours
3	1-5	Work Unit Code (WUC)
4	6-8	How-Malfunction Code (HMC)

The output tape consists of 20-character data records, blocked 90 to a tape record. It took four minutes to sort 243,801 records for a fleet of 150 F-106 aircraft. A sample output is shown in Figure 5-17.





1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159	160	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200	201	202	203	204	205	206	207	208	209	210	211	212	213	214	215	216	217	218	219	220	221	222	223	224	225	226	227	228	229	230	231	232	233	234	235	236	237	238	239	240	241	242	243	244	245	246	247	248	249	250	251	252	253	254	255	256	257	258	259	260	261	262	263	264	265	266	267	268	269	270	271	272	273	274	275	276	277	278	279	280	281	282	283	284	285	286	287	288	289	290	291	292	293	294	295	296	297	298	299	300	301	302	303	304	305	306	307	308	309	310	311	312	313	314	315	316	317	318	319	320	321	322	323	324	325	326	327	328	329	330	331	332	333	334	335	336	337	338	339	340	341	342	343	344	345	346	347	348	349	350	351	352	353	354	355	356	357	358	359	360	361	362	363	364	365	366	367	368	369	370	371	372	373	374	375	376	377	378	379	380	381	382	383	384	385	386	387	388	389	390	391	392	393	394	395	396	397	398	399	400	401	402	403	404	405	406	407	408	409	410	411	412	413	414	415	416	417	418	419	420	421	422	423	424	425	426	427	428	429	430	431	432	433	434	435	436	437	438	439	440	441	442	443	444	445	446	447	448	449	450	451	452	453	454	455	456	457	458	459	460	461	462	463	464	465	466	467	468	469	470	471	472	473	474	475	476	477	478	479	480	481	482	483	484	485	486	487	488	489	490	491	492	493	494	495	496	497	498	499	500	501	502	503	504	505	506	507	508	509	510	511	512	513	514	515	516	517	518	519	520	521	522	523	524	525	526	527	528	529	530	531	532	533	534	535	536	537	538	539	540	541	542	543	544	545	546	547	548	549	550	551	552	553	554	555	556	557	558	559	560	561	562	563	564	565	566	567	568	569	570	571	572	573	574	575	576	577	578	579	580	581	582	583	584	585	586	587	588	589	590	591	592	593	594	595	596	597	598	599	600	601	602	603	604	605	606	607	608	609	610	611	612	613	614	615	616	617	618	619	620	621	622	623	624	625	626	627	628	629	630	631	632	633	634	635	636	637	638	639	640	641	642	643	644	645	646	647	648	649	650	651	652	653	654	655	656	657	658	659	660	661	662	663	664	665	666	667	668	669	670	671	672	673	674	675	676	677	678	679	680	681	682	683	684	685	686	687	688	689	690	691	692	693	694	695	696	697	698	699	700	701	702	703	704	705	706	707	708	709	710	711	712	713	714	715	716	717	718	719	720	721	722	723	724	725	726	727	728	729	730	731	732	733	734	735	736	737	738	739	740	741	742	743	744	745	746	747	748	749	750	751	752	753	754	755	756	757	758	759	760	761	762	763	764	765	766	767	768	769	770	771	772	773	774	775	776	777	778	779	780	781	782	783	784	785	786	787	788	789	790	791	792	793	794	795	796	797	798	799	800	801	802	803	804	805	806	807	808	809	810	811	812	813	814	815	816	817	818	819	820	821	822	823	824	825	826	827	828	829	830	831	832	833	834	835	836	837	838	839	840	841	842	843	844	845	846	847	848	849	850	851	852	853	854	855	856	857	858	859	860	861	862	863	864	865	866	867	868	869	870	871	872	873	874	875	876	877	878	879	880	881	882	883	884	885	886	887	888	889	890	891	892	893	894	895	896	897	898	899	900	901	902	903	904	905	906	907	908	909	910	911	912	913	914	915	916	917	918	919	920	921	922	923	924	925	926	927	928	929	930	931	932	933	934	935	936	937	938	939	940	941	942	943	944	945	946	947	948	949	950	951	952	953	954	955	956	957	958	959	960	961	962	963	964	965	966	967	968	969	970	971	972	973	974	975	976	977	978	979	980	981	982	983	984	985	986	987	988	989	990	991	992	993	994	995	996	997	998	999	1000
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**Figure 5-17. Sample Output - Sort Unscheduled Manhour**

#### 5.4.6 MEAN AND VARIANCE OF UNSCHEDULED MANHOUR

5.4.6.1 Purpose. This program generates an output file containing mean and variance of unscheduled manhour data by HMC, WUC, and isochronal subset type.

5.4.6.2 Input Data and Procedures. No input data is needed for this program. For a given WUC and HMC, data of unscheduled manhours will be accumulated. Values of mean and variance are then computed and are written on an output file.

5.4.6.3 Output Description. The output consists of values of mean and variance of unscheduled manhour, WUC, and HMC. The output file has the following record format.

<u>Column</u>	<u>Description</u>
1	Isochronal Inspection Type = 1 Isochronal = 2 Non-Isochronal
11	Set to 2, for Unscheduled Manhour
13-17	Work Unit Code (WUC)
19-21	How-Malfunction Code (HMC)
23-30	Mean for Unscheduled Manhour
32-39	Variance for Unscheduled Manhour
50	Record Mark

The tape file consists of 50-character data records, blocked 60 to a tape record. To generate 27,121 records for a fleet of 150 F-106 aircraft required six minutes on the IBM 370. A sample output from a recent F-106 run and the output record format are shown in Figures 5-18 and 5-11, respectively.

#### 5.4.7 MERGE AND ADD WUC GROUP IDENTIFICATION

5.4.7.1 Purpose. The purpose of this COBOL program is to merge the output files of Manhour and NORM, Mean and Variance of Unscheduled NORM Hour, and Mean and Variance of Unscheduled Manhour data into one file and to classify each record into a particular WUC group.

5.4.7.2 Input Data and Procedures. The input consists of three data tape files and a deck of cards defining the WUC groups. The three input data tape files are described in Paragraphs 5.4.1, 5.4.4, and 5.4.6 and the record layouts are given in Figure 5-11. A full description of collecting WUC data into groups is given in Paragraph 4.2.2. Essentially, data is collected at the three-digit level for a defined set of WUCs and at the two-digit level for the remaining data.

**Figure 5-18. Sample Output — Mean and Variance of Unscheduled Manhour**

A sample input data deck, that used for the F-106 Scheduled Maintenance Study, is shown in Figure 5-19.

5.4.7.3 Output Description. The output consists of a magnetic tape file, 50 characters to a data record, blocked 60 to a tape record. The record layout is shown in Figure 5-11. The significance of each variable is determined by reference to the RECORD ID in Column 11; this was assigned during creation of the three input data files. A sample of output data is shown in Figure 5-20. On a recent IBM 370 run for a fleet of 150 aircraft and 2201 WUCs, total computer time was two minutes. A total of 55,853 records were generated.

# 80 COLUMN GENERAL PURPOSE FORM

PAGE  OF

JOB TITLE

ENGINEER

JOB NO.

AWO

TWO WAY

FUNCTION

ANALYST

DATE

W-1	W-2	W-3	W-4	W-5	W-6	W-7	W-8
0000000001	1111111112	2222222223	3333333334	4444444445	5555555556	6666666667	7777777778
0000000002	1111111113	2222222224	3333333335	4444444446	5555555557	6666666668	7777777779
0000000003	1111111114	2222222225	3333333336	4444444447	5555555558	6666666669	7777777780
0000000004	1111111115	2222222226	3333333337	4444444448	5555555559	6666666670	7777777781
0000000005	1111111116	2222222227	3333333338	4444444449	5555555560	6666666671	7777777782
0000000006	1111111117	2222222228	3333333339	4444444450	5555555561	6666666672	7777777783
0000000007	1111111118	2222222229	3333333340	4444444451	5555555562	6666666673	7777777784
0000000008	1111111119	2222222230	3333333341	4444444452	5555555563	6666666674	7777777785
0000000009	1111111120	2222222231	3333333342	4444444453	5555555564	6666666675	7777777786
0000000010	1111111121	2222222232	3333333343	4444444454	5555555565	6666666676	7777777787
0000000011	1111111122	2222222233	3333333344	4444444455	5555555566	6666666677	7777777788
0000000012	1111111123	2222222234	3333333345	4444444456	5555555567	6666666678	7777777789
0000000013	1111111124	2222222235	3333333346	4444444457	5555555568	6666666679	7777777790
0000000014	1111111125	2222222236	3333333347	4444444458	5555555569	6666666680	7777777791
0000000015	1111111126	2222222237	3333333348	4444444459	5555555570	6666666681	7777777792
0000000016	1111111127	2222222238	3333333349	4444444460	5555555571	6666666682	7777777793
0000000017	1111111128	2222222239	3333333350	4444444461	5555555572	6666666683	7777777794
0000000018	1111111129	2222222240	3333333351	4444444462	5555555573	6666666684	7777777795
0000000019	1111111130	2222222241	3333333352	4444444463	5555555574	6666666685	7777777796
0000000020	1111111131	2222222242	3333333353	4444444464	5555555575	6666666686	7777777797
0000000021	1111111132	2222222243	3333333354	4444444465	5555555576	6666666687	7777777798
0000000022	1111111133	2222222244	3333333355	4444444466	5555555577	6666666688	7777777799
0000000023	1111111134	2222222245	3333333356	4444444467	5555555578	6666666689	7777777800
0000000024	1111111135	2222222246	3333333357	4444444468	5555555579	6666666690	7777777801
0000000025	1111111136	2222222247	3333333358	4444444469	5555555580	6666666691	7777777802
0000000026	1111111137	2222222248	3333333359	4444444470	5555555581	6666666692	7777777803
0000000027	1111111138	2222222249					

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JOB TITLE		ENGINEER		PAGE		OF	
JOB NO.	AWD	EWG-WAP	FUNCTION	ANALYST	DATE		
W-1	W-2	W-3	W-4	W-5	W-6	W-7	W-8
0000000001	111111112	222222223	333333334	444444445	555555556	666666667	777777778
1122222222	223333333	334444444	445555555	556666666	667777777	778888888	889999999
45							
46A							
46C							
46G							
46H							
46J							
46							
47							
49A							
49							
51							
52							
55							
63							
65							
71							
75							
93							
97							
11							
74GOG							
74H							
74B							
74C							
74D							

[illegible]

5-48





#### 5.4.8 SORT MANHOUR AND NORM DATA

5.4.8.1 Purpose. The purpose of this task is to sort the output file from Merge and Add WUC Group Identification for further processing.

5.4.8.2 Input Data and Procedures. The input consists of the tape file from the Merge and Add WUC Group Identification described in Paragraph 5.4.7.3.

5.4.8.3 Output Description. The output file, 50 characters to the data record, blocked 60 to a tape record, is sorted according to the following keys.

<u>Key</u>	<u>Column</u>	<u>Description</u>
1	1	Aircraft Subset (Ascending)
2	2-3	Group Identification (Ascending)
3	13-17	WUC (Ascending)
4	19-21	HMC (Descending)
5	11	Record Identification (Ascending)

It required about two minutes on the IBM 370 to sort 55,860 records for the 150-aircraft F-106 fleet.

#### 5.4.9 MEANS OF WUC SET

5.4.9.1 Purpose. The purpose of this task is to compute the mean values of various data from the data bank, by WUC group.

5.4.9.2 Input Data and Procedures. The input data consists of the sorted output of the data at the five-digit WUC level previously described. The program generates two output files: data at the five-digit WUC level and data at the WUC group level.

5.4.9.3 Output Description. The output consists of two magnetic tape files, both 50 characters to a data record, blocked 60 to a tape record. The format of each data record is shown in Figure 5-11.

At the five-digit WUC level, the following variables are computed and written on File -2.

$$C = \sum_{HMC} [\overline{MH/ma(WUC, HMC)} \cdot N_{uma}(WUC, HMC)]$$

$$N_2 = \sum_{HMC} N_{uma}(WUC, HMC)$$

$\sum_{HMC}$  indicates a summation over all HMCs applicable to a particular WUC.



A sample output is shown in Figure 5-21. At the WUC group level, the following variables are computed and written on File - 3.

Mean manhours per unscheduled maintenance action:

$$\overline{\text{MH/uma}} = \frac{1}{N_1} \sum_{\text{WUC}} \left\{ \sum_{\text{HMC}} [\overline{\text{MH/ma}}(\text{WUC}, \text{HMC}) \cdot N_{\text{uma}}(\text{WUC}, \text{HMC})] \right\}$$

$$N_1 = \sum_{\text{WUC}} \sum_{\text{HMC}} N_{\text{uma}}(\text{WUC}, \text{HMC})$$

Mean NORM per unscheduled maintenance action:

$$\overline{\text{NORM/uma}} = \frac{1}{N_1} \sum_{\text{WUC}} \left\{ N_2 \cdot \overline{\text{NORM/ma}}(\text{WUC}) \right\}$$

Mean manhours per periodic inspection repair action:

$$(\overline{\text{MH/rep}})_{\text{PE}} = \frac{\sum_{\text{WUC}} \left\{ \sum_{\text{HMC}} [\text{MH/ma}(\text{WUC}, \text{HMC}) \cdot N_{\text{rep}}(\text{WUC}, \text{HMC})_{\text{PE}}] \right\}}{\sum_{\text{WUC}} \sum_{\text{HMC}} [N_{\text{rep}}(\text{WUC}, \text{HMC})_{\text{PE}}]}$$

Mean manhours per hourly postflight inspection repair action:

$$(\overline{\text{MH/rep}})_{\text{HPO}} = \frac{\sum_{\text{WUC}} \left\{ \sum_{\text{HMC}} [\text{MH/ma}(\text{WUC}, \text{HMC}) \cdot N_{\text{rep}}(\text{WUC}, \text{HMC})_{\text{HPO}}] \right\}}{\sum_{\text{WUC}} \sum_{\text{HMC}} [N_{\text{rep}}(\text{WUC}, \text{HMC})_{\text{HPO}}]}$$

In these equations, the symbol  $\sum_{\text{WUC}}$  indicates a summation over all WUCs in the set.

A sample output is shown in Figure 5-22.

On a recent IBM 370 run for an F-106 fleet of 150 aircraft and 2201 WUCs, total computer time was two minutes. A total of 2886 records were generated on File -2 and 108 records were generated on File -3.

#### 5.4.10 VARIANCE OF WUC SET

5.4.10.1 Purpose. This COBOL program computes the variance of various data from the data bank and prints the final mean and variance results in convenient tabular form.





5.4.10.2 Input Data and Procedures. The input consists of three files: the sorted output data at the five-digit WUC level and the two files from the Mean of WUC Set program. The program computes the variance of NORM and manhours per unscheduled maintenance action, leads in the previously computed mean values, and then prints out six data results for each WUC group of each aircraft subset.

5.4.10.3 Output Description. The output consists of a file, 100 characters to a data record, blocked 20 to a tape record. The variances are first computed for the WUC group using all three input files as follows.

Variance of manhours per unscheduled maintenance action:

$$\sigma_{MH/uma}^2 = \frac{1}{N_1} \sum_{WUC} \left\{ N_2 \cdot A^2 + \sum_{HMC} \left[ N_{uma}(WUC, HMC) \cdot \sigma_{MH/ma}^2(WUC, HMC) + B^2 \right] \right\}$$

where:

$$A = \frac{C}{N_2} - \overline{MH/uma}$$

$$B = \overline{MH/ma}(WUC, HMC) - \frac{C}{N_2}$$

Variance of NORM per unscheduled maintenance action:

$$\sigma_{NORM/uma}^2 = \frac{1}{N_1} \sum_{WUC} N_2 \left\{ \sigma_{NORM/ma}^2(WUC) + \left[ \overline{NORM/ma}(WUC) - \overline{NORM/uma} \right]^2 \right\}$$

For each aircraft subset and WUC group, the output file contains:

- a. WUC group descriptor.
- b. Aircraft Subset.
- c. Mean Manhours/Unscheduled Maintenance Action.
- d. Variance of Manhours/Unscheduled Maintenance Action.
- e. Mean NORM/Unscheduled Maintenance Action.
- f. Variance of NORM/Unscheduled Maintenance Action.

g. Mean Manhours/Periodic Inspection Repair Action.

h. Mean Manhours/Hourly Postflight Inspection Repair Action.

A sample output is shown in Figure 5-23. It required two minutes to process the input files for 150 F-106 aircraft; 114 lines of output were generated.

RESULTS OF PROCESSING MAINTENANCE MANHOUR AND NORM DATA						PAGE 1	
GRUCCP	AIRCRAFT	MEAN	VARIANCE	MEAN	VARIANCE	MEAN	MEAN
11J	ISO	8.1	66.2	5.7	166.1	2.9	3.3
11K	ISO	2.3	26.5	0.0	0.0	2.2	1.5
12B	ISO	1.5	1.3	0.0	0.0	5.2	0.0
12C	ISO	4.3	17.8	0.9	19.9	1.8	2.6
13C	ISO	5.2	43.8	0.9	11.7	4.0	0.5
13J	ISO	7.9	32.2	0.0	0.0	4.1	0.5
13K	ISO	3.0	11.4	1.0	29.9	2.3	3.5
13M	ISO	3.4	12.1	1.4	11.6	3.3	0.0
23K	ISO	3.1	6.3	0.9	34.0	3.2	0.0
23M	ISO	5.4	16.0	2.4	19.0	1.0	1.6
23N	ISO	4.3	12.0	1.8	18.1	1.4	0.4
23S	ISO	4.3	33.2	2.7	9.8	1.0	0.1
23T	ISO	7.0	82.4	2.4	82.6	6.4	0.1
41F	ISO	3.7	3.8	1.4	12.7	2.0	5.5
41E	ISO	3.2	3.9	0.9	29.0	1.5	3.9
42F	ISO	5.6	41.9	1.0	9.7	0.7	3.9
42G	ISO	0.9	1.0	0.0	0.0	1.0	0.0
42H	ISO	3.7	13.4	1.3	14.6	2.0	3.0
44	ISO	1.9	2.6	0.0	0.0	0.1	0.0
45E	ISO	4.7	38.2	1.4	29.2	3.8	0.4
45J	ISO	2.1	18.2	0.9	61.3	1.8	1.6
45	ISO	2.9	10.5	1.0	23.2	3.1	5.5
46A	ISO	8.4	61.3	1.4	13.6	6.9	5.9
46C	ISO	9.6	47.4	1.7	19.0	2.0	1.0
46G	ISO	4.3	96.9	2.2	2.7	2.7	2.7
46H	ISO	7.2	46.3	0.8	4.8	6.6	2.8
46J	ISO	5.4	15.6	1.4	17.4	2.7	0.0
47	ISO	4.3	30.4	1.1	16.8	3.9	1.9
49A	ISO	1.5	1.3	0.0	0.0	3.7	0.0
49	ISO	3.5	37.0	0.4	10.7	1.6	4.1
51	ISO	2.6	22.3	0.5	6.2	1.9	1.4
52	ISO	4.1	29.2	0.7	6.0	7.5	4.0
53	ISO	2.9	26.8	0.8	6.9	0.0	1.3
61	ISO	2.4	12.5	0.7	13.1	1.2	1.6
75	ISO	2.9	21.7	0.4	17.1	3.6	5.7
75	ISO	3.2	16.8	0.0	8.4	0.6	2.6
77	ISO	4.8	44.5	0.6	1.9	2.1	2.0
74CJO	ISO	1.5	2.6	0.8	3.0	2.7	1.0
74A	ISO	2.3	23.1	1.0	25.6	1.1	1.1
74B	ISO	1.2	1.8	0.3	4.0	1.7	1.7
74C	ISO	1.2	41.1	1.6	23.1	1.3	1.6
74D	ISO	1.8	7.3	0.4	5.1	1.2	1.5
74F	ISO	2.9	32.1	0.5	4.6	2.3	1.9
74H	ISO	2.3	9.5	0.3	17.1	1.8	1.1
74K	ISO	1.9	5.9	0.2	1.7	0.8	1.2
74L	ISO	5.3	14.4	1.4	58.3	1.4	3.9
74P	ISO	2.9	30.1	2.2	123.3	2.6	4.9
74Q	ISO	6.4	61.4	0.4	8.7	1.7	1.4
11J	NCN-ISO	2.9	30.1	0.1	7.3	2.4	2.0
11K	NCN-ISO	2.1	35.0	0.1	1.5	2.1	1.6
11	NCN-ISO	2.0	4.4	0.1	5.1	1.6	1.7
12B	NCN-ISO	2.5	13.3	1.1	38.6	2.7	1.3
12C	NCN-ISO	4.8	41.9	0.3	0.1	2.1	1.6
13C	NCN-ISO	3.2	21.2	0.3	0.1	2.1	1.6

Figure 5-23. Sample Output - Variance of WUC

# SECTION 6

## COMPUTER SOURCE DECK LISTINGS

### 6.1 66-1 FILE GENERATION PROGRAMS

#### 6.1.1 66-1 SCREEN

```

//T9897P JOB 01: 6. WANG 1: PRTY>02, TYPRUN>HOLD
//C9897C EXEC PGM=SL, TIME>02, ACCT>035322107
//CHG.TU13 DU DISP>[PASS], UNIT>[T+P2, 1, DEFER], DSN>B.9895402. CT13 1
// LABEL>[NL], C
// VUL>SER>F1 T13
//CHG.IU22 DU DSN>P.9895403, SPACE>[CYL, [022, 002]] D22-OUT
//CHG.INPUT DU *, SPACE>[CYL, [1, 1]] 1440 CDS
UDU00 CU=LINE COMPILE 6. WANG. C98970
U1040 DATE-WRITE... 5 JAN 72. C98970
U1050 REMARKS. C98970
U1060 PROGRAM SCREENS 66-1 DATA TAPE. C98970
U2000 ENVIRONMENT DIVISION. C98970
U2010 CONFIGURATION SECTION. C98970
U2020 SOURCE=COMPUTER, IBM-360. C98970
U2030 OBJECT=COMPUTER, IBM-360. C98970
U2100 INPUT-OUTPUT SECTION. C98970
U2110 FILE-CONTROL. C98970
U2120 SELECT INFILE ASSIGN TO UT-S-TU13 C98970
U2130 RESERVE 1 ALTERNATE AREA. C98970
U2140 SELECT OUTFILE ASSIGN TO UT-S-TU22 C98970
U2150 RESERVE 1 ALTERNATE AREA. C98970
U2160 SELECT SC-FILE ASSIGN TO DA-S-DT01 C98970
U2170 RESERVE 1 ALTERNATE AREA. C98970
10000 DATA DIVISION. C98970
10010 FILE SECTION. C98970
10100 FD INFILE C98970
10120 RECORDING MODE IS F C98970
10130 BLOCK CONTAINS 30 RECORDS C98970
10140 RECORD CONTAINS 90 CHARACTERS C98970
10150 LABEL RECORDS ARE OMITTED C98970
10160 DATA RECORDS ARE INDATA. C98970
10170 01 INDATA SYNC. C98970
10178 02 DATA. C98970
10180 03 DATA1 PICTURE XX. C98970
10190 03 TIPL PICTURE X(4). C98970
10200 03 DATA2 PICTURE X(8). C98970
10210 02 SER-NO PICTURE X(8). C98970
10220 02 DATA3 PICTURE X(18). C98970
10228 02 DATE-III. C98970
10230 03 DAY PICTURE 99. C98970
10240 03 MONTH PICTURE 99. C98970
10250 03 YEAR PICTURE 9. C98970
10258 02 DATA7. C98970
10260 03 WUC PICTURE X(5). C98970
10270 03 ACTION PICTURE X. C98970
10280 03 WD PICTURE X. C98970
10290 03 HOW-MAL PICTURE X(3). C98970
10300 03 DATA4 PICTURE X(27). C98970
10310 03 REC-ID PICTURE X. C98970
10320 03 THM PICTURE X. C98970
10330 03 DATA5 PICTURE X. C98970
10340 02 FILLER PICTURE XXXX. C98970
10350 02 DATA6 PICTURE X. C98970
11100 FD OUTFILE C98970
11120 RECORDING MODE IS F C98970
11130 BLOCK CONTAINS 30 RECORDS C98970
11140 RECORD CONTAINS 90 CHARACTERS C98970
11150 LABEL RECORDS ARE OMITTED C98970
11160 DATA RECORDS ARE OUTDATA. C98970
11170 01 OUTDATA SYNC. C98970

```

11178	02	DATA7-OUT.			C98970
11180	03	DATA1-OUT	PICTURE XX.		C98970
11190	03	TYPE-OUT	PICTURE X(4).		C98970
11200	03	DATA2-OUT	PICTURE X(8).		C98970
11210	02	SER-NO-OUT	PICTURE X(8).		C98970
11220	02	DATA3-OUT	PICTURE X(18).		C98970
11228	02	DATE-OUT.			C98970
11230	03	DAY-OUT	PICTURE 99.		C98970
11240	03	MONTH-OUT	PICTURE 99.		C98970
11250	03	YEAR-OUT	PICTURE 9.		C98970
11258	02	DATA7-OUT.			C98970
11260	03	WUC-OUT	PICTURE X(5).		C98970
11270	03	ACTION-OUT	PICTURE X.		C98970
11280	03	WD-OUT	PICTURE X.		C98970
11290	03	HOW-MAL-OUT	PICTURE XXX.		C98970
11300	03	DATA4-OUT	PICTURE X(27).		C98970
11310	03	HEC-ID-OUT	PICTURE X.		C98970
11320	03	THM-OUT	PICTURE X.		C98970
11330	03	DATA5-OUT	PICTURE X.		C98970
11340	02	JOAY	PICTURE 9999.		C98970
11350	02	DATA6-OUT	PICTURE X.		C98970
11500	FD	SC-FILE			C98970
11510		RECORDING MODE IS F			C98970
11520		BLOCK CONTAINS 20 RECORDS			C98970
11530		RECORD CONTAINS 80	CHARACTERS		C98970
11540		LABEL RECORDS ARE STANDARD			C98970
11550		DATA RECORDS ARE DATA-IN.			C98970
11600	01	DATA-IN SYNC.			C98970
11610	02	SCHLEN-DATA	PICTURE X(80).		C98970
11620	02	FILLER REDEFINES SCHLEN-DATA.			C98970
11630	03	DATA-1	PICTURE X(4).		C98970
11640	03	FILLER	PICTURE X(76).		C98970
11650	02	FILLER REDEFINES SCHLEN-DATA.			C98970
11660	03	DATA-2	PICTURE X.		C98970
11670	03	FILLER	PICTURE X(79).		C98970
11680	02	FILLER REDEFINES SCHLEN-DATA.			C98970
11690	03	DATA-3	PICTURE 99.		C98970
11700	03	FILLER	PICTURE X(78).		C98970
11710	02	FILLER REDEFINES SCHLEN-DATA.			C98970
11720	03	DATA-4	PICTURE X(8).		C98970
11730	03	FILLER	PICTURE X(72).		C98970
11740	02	FILLER REDEFINES SCHLEN-DATA.			C98970
11750	03	DATA-5	PICTURE X(3).		C98970
11760	03	FILLER	PICTURE X(77).		C98970
30000		WORKING-STORAGE SECTION.			C98970
30010	01	NINE SYNC.			C98970
30020	02	FILLER	PICTURE XX	VALUE 1991.	C98970
30030	02	FILLER	PICTURE X(4)	VALUE 199991.	C98970
30040	02	FILLER	PICTURE X(8)	VALUE 199999991.	C98970
30050	02	FILLER	PICTURE X(8)	VALUE 199999991.	C98970
30060	02	FILLER	PICTURE X(18)	VALUE	C98970
30070			19999999999999999991.		C98970
30080	02	FILLER	PICTURE 99	VALUE 99.	C98970
30090	02	FILLER	PICTURE 99	VALUE 99.	C98970
30100	02	FILLER	PICTURE 9	VALUE 9.	C98970
30110	02	FILLER	PICTURE X(5)	VALUE 1999991.	C98970
30120	02	FILLER	PICTURE X	VALUE 191.	C98970
30130	02	FILLER	PICTURE X	VALUE 191.	C98970
30140	02	FILLER	PICTURE XXX	VALUE 19991.	C98970
30150	02	FILLER	PICTURE X(27)	VALUE	C98970
30160			19999999999999999999999991.		C98970
30170	02	FILLER	PICTURE X	VALUE 191.	C98970
30180	02	FILLER	PICTURE X	VALUE 191.	C98970
30190	02	FILLER	PICTURE X	VALUE 191.	C98970
30200	02	FILLER	PICTURE X	VALUE 191.	C98970
30210	02	FILLER	PICTURE X	VALUE 191.	C98970
30220	02	FILLER	PICTURE X	VALUE 191.	C98970
30230	02	FILLER	PICTURE X	VALUE 191.	C98970
30240	02	FILLER	PICTURE X	VALUE 191.	C98970
30250	02	FILLER	PICTURE X	VALUE 191.	C98970
30260	02	FILLER	PICTURE X	VALUE 191.	C98970
30270	02	FILLER	PICTURE X	VALUE 191.	C98970
30280	02	FILLER	PICTURE X	VALUE 191.	C98970
30290	02	FILLER	PICTURE X	VALUE 191.	C98970
30300	02	FILLER	PICTURE X	VALUE 191.	C98970
30310	02	FILLER	PICTURE X	VALUE 191.	C98970
30320	02	FILLER	PICTURE X	VALUE 191.	C98970
30330	02	FILLER	PICTURE X	VALUE 191.	C98970
30340	02	FILLER	PICTURE X	VALUE 191.	C98970
30350	02	FILLER	PICTURE X	VALUE 191.	C98970
30360	02	FILLER	PICTURE X	VALUE 191.	C98970
30370	02	FILLER	PICTURE X	VALUE 191.	C98970
30380	02	FILLER	PICTURE X	VALUE 191.	C98970
30390	02	FILLER	PICTURE X	VALUE 191.	C98970
30400	02	FILLER	PICTURE X	VALUE 191.	C98970
30410	02	FILLER	PICTURE X	VALUE 191.	C98970
30420	02	FILLER	PICTURE X	VALUE 191.	C98970
30430	02	FILLER	PICTURE X	VALUE 191.	C98970
30440	02	FILLER	PICTURE X	VALUE 191.	C98970
30450	02	FILLER	PICTURE X	VALUE 191.	C98970
30460	02	FILLER	PICTURE X	VALUE 191.	C98970
30470	02	FILLER	PICTURE X	VALUE 191.	C98970
30480	02	FILLER	PICTURE X	VALUE 191.	C98970
30490	02	FILLER	PICTURE X	VALUE 191.	C98970
30500	02	FILLER	PICTURE X	VALUE 191.	C98970
30510	02	FILLER	PICTURE X	VALUE 191.	C98970
30520	02	FILLER	PICTURE X	VALUE 191.	C98970
30530	02	FILLER	PICTURE X	VALUE 191.	C98970
30540	02	FILLER	PICTURE X	VALUE 191.	C98970
30550	02	FILLER	PICTURE X	VALUE 191.	C98970
30560	02	FILLER	PICTURE X	VALUE 191.	C98970
30570	02	FILLER	PICTURE X	VALUE 191.	C98970
30580	02	FILLER	PICTURE X	VALUE 191.	C98970
30590	02	FILLER	PICTURE X	VALUE 191.	C98970
30600	02	FILLER	PICTURE X	VALUE 191.	C98970
30610	02	FILLER	PICTURE X	VALUE 191.	C98970

30620	02 FILLER	PICTURE 9(4)	VALUE 365.	C90970
30630	02 FILLER	PICTURE 9(4)	VALUE 730.	C90970
30640	02 FILLER	PICTURE 9(4)	VALUE 1095.	C90970
30650	02 FILLER	PICTURE 9(4)	VALUE 1461.	C90970
30660	02 FILLER	PICTURE 9(4)	VALUE 1826.	C90970
30670	02 FILLER	PICTURE 9(4)	VALUE 2191.	C90970
30680	02 FILLER	PICTURE 9(4)	VALUE 2556.	C90970
30690	01 DAY-IN-YEAR-TABLE REDEFINES DAYS-IN-YEARS SYNC.			C90970
30700	02 DAY-YEAR OCCURS 0 TIMES			C90970
30710		PICTURE 9(4).		C90970
30800	01 SER-NO-A	PICTURE X(8) SYNC.		C90970
30810	01 TABLE-S-N, REDEFINES SER-NO-A SYNC.			C90970
30820	02 LISTS-S-N,	OCCURS 8 TIMES,		C90970
30830		PICTURE X.		C90970
30890	01 LIT-ZERO	PICTURE XXX SYNC VALUE 10001.		C90970
30900	01 KOUNT	PICTURE S999 COMPUTATIONAL VALUE ZERO SYNC.		C90970
30910	01 KNT	PICTURE S999 COMPUTATIONAL VALUE ZERO SYNC.		C90970
30920	01 LOW-S-N SYNC	PICTURE X(8).		C90970
30930	01 HIGH-S-N SYNC	PICTURE X(8).		C90970
30940	01 LEAP-YEAR-68	PICTURE 9 SYNC VALUE 4.		C90970
30950	01 LEAP-YEAR-72	PICTURE 9 SYNC VALUE 8.		C90970
30960	01 A-C-TYPE SYNC	PICTURE X(4).		C90970
30970	01 RECURUS-READ	PICTURE 9(6) SYNC VALUE ZERO.		C90970
30980	01 RECURUS-PASS	PICTURE 9(6) SYNC VALUE ZERO.		C90970
30990	01 REC-IDENT SYNC	PICTURE X.		C90970
31010	01 NO-REJ-A-C SYNC	PICTURE 99.		C90970
31020	01 NO-REJ-HMC SYNC	PICTURE 99.		C90970
31030	01 NO-REJ-ACTION SYNC	PICTURE 99.		C90970
31140	01 REJ-S-N SYNC.			C90970
31150	02 R-S-N OCCURS 25 TIMES DEPENDING ON NO-REJ-A-C.			C90970
31160		PICTURE X(8).		C90970
31250	01 TABLE-ACTION-REJ SYNC.			C90970
31260	02 ACTION-REJ OCCURS 8 TIMES DEPENDING ON NO-REJ-ACTION.			C90970
31270		PICTURE X.		C90970
50000	PROCEDURE DIVISION.			C90970
50010	OPEN-FILES.			C90970
50020	OPEN INPUT INFILE, SC-FLE.			C90970
50030	OPEN OUTPUT OUTFILE.			C90970
50035	PERFORM SCREEN-DATA-IN THRU END-S-D-I.			C90970
50040	READ1.			C90970
50050	READ INFILE			C90970
50060	AT END GO TO BLOCK-CHECK.			C90970
50070	ADD 1 TO RECORDS-READ.			C90970
50080	IF TYPE NOT EQUAL TO A-C-TYPE GO TO READ1.			C90970
50090	IF REC-ID NOT EQUAL TO REC-IDENT GO TO READ1.			C90970
50100	IF HOW-MAL LESS THAN LIT-ZERO GO TO READ1.			C90970
50110	IF DAY NOT GREATER THAN ZERO GO TO READ1.			C90970
50120	IF SER-NO EQUAL TO SPACE GO TO READ1.			C90970
50200	SPECIAL-SCREEN.			C90970
50210	MOVE ZERO TO KOUNT.			C90970
50220	CHECK1.			C90970
50230	ADD 1 TO KOUNT.			C90970
50240	IF HOW-MAL IS EQUAL TO HOW-MAL-REJ [KOUNT] GO TO READ1.			C90970
50250	IF KOUNT IS LESS THAN NO-REJ-HMC GO TO CHECK1.			C90970
50300	MOVE ZERO TO KOUNT.			C90970
50310	CHECK2.			C90970
50320	ADD 1 TO KOUNT.			C90970
50330	IF ACTION EQUAL TO ACTION-REJ [KOUNT] GO TO READ1.			C90970
50340	IF KOUNT IS LESS THAN NO-REJ-ACTION GO TO CHECK2.			C90970
50400	CHECK-S-N-FOR-8-DIGITS.			C90970
50410	MOVE SER-NO TO SER-NO-A.			C90970
50420	IF LISTS-S-N (8) NOT EQUAL SPACE GO TO CHECK-S-N.			C90970
50430	MOVE 7 TO KOUNT.			C90970
50440	MOVE 8 TO KNT.			C90970
50450	LOOP1.			C90970
50460	MOVE LISTS-S-N [KOUNT] TO LISTS-S-N [KNT].			C90970
50470	IF KOUNT EQUAL TO 3 GO TO END-LOOP1.			C90970
50480	SUBTRACT 1 FROM KOUNT.			C90970
50490	SUBTRACT 1 FROM KNT.			C90970
50500	GO TO LOOP1.			C90970
50510	END-LOOP1.			C90970
50520	MOVE ZERO TO LISTS-S-N [KOUNT].			C90970
50600	CHECK-S-N.			C90970
50610	IF SER-NO-A IS LESS THAN LOW-S-N GO TO READ1.			C90970
50620	IF SER-NO-A IS GREATER THAN HIGH-S-N GO TO READ1.			C90970
50700	TEST-S-N.			C90970
50710	MOVE ZERO TO KOUNT.			C90970
50720	LOOP2.			C90970
50730	ADD 1 TO KOUNT.			C90970
50740	IF SER-NO-A IS EQUAL TO R-S-N [KOUNT] GO TO READ1.			C90970
50750	IF KOUNT IS LESS THAN NO-REJ-A-C GO TO LOOP2.			C90970
50800	CAL-DATL.			C90970
50810	COMPUTE KOUNT > YEAR - 4.			C90970
50820	IF KOUNT IS LESS THAN 1 THEN ADD 10 TO KOUNT.			C90970
50830	MOVE MONTH TO KNT.			C90970
50840	COMPUTE JOAY > DAY < KDAY [KNT] < DAY-YEAR [KOUNT].			C90970
50850	IF KOUNT EQUAL LEAP-YEAR-68 GO TO LEAP-YEAR.			C90970
50860	IF KOUNT EQUAL LEAP-YEAR-72 GO TO LEAP-YEAR.			C90970



[illegible]

```

805
812
04      NO REJ ACTION
H
J
T
U
*END
/*      PLACE TFG DATA BEFORE THIS CARD
//TPR,TU13  DU  DISP>[OLD,KEEP],VOL>SER>+F2,UNIT>T+F2,LABEL>X,NL]
//TPR,TU22  DD  DISP>[OLD,PASS]
//TPR,TPRIN  DU  *,SPACE>[TRK,[1,1]]
T/P  DT01    1010080Z080
T/P  TU22    1020090Z090
/*

```

D22-PASS

### 6.1.2 66-1 SORT

```

//C9897S EXEC P9022N,W>010,TIME>03,ACCT>D35322107
//CHG,SORTIN  DU  DSN>+P,9895403,DISP>[OLD,DELETE],
//          CC>[LRECL>0090,BLKSIZE>2700],LABEL>X,NSL,RETPD>000]
//CHG,SORTOUT DU  DISP>[KEEP],UNIT>[T+F1,1,DEFER],DSN>+A,9895405, CT12 1
//          VOL>SER>[+F1,A+F1,B+F1,C+F1,D+F1,E+F1,F+F1,G+F1,H+F1,
//          I+F1,J+F1,K+F1,L+F1,M+F1,N+F1,O+F1,P+F1,Q+F1,R+F1,S+F1],CT12 2
//          DCB>[LRECL>0090,BLKSIZE>2700]
//CHG,SYSIN  DU  *,DCB>BLKSIZE>0080,SPACE>[TRK,[1,1]]
SORT FIELDS>[015,008,CH,A,086,004,CH,A,046,005,CH,A,053,003,CH,A, C
          051,002,CH,A,056,029,CH,A,023,023,CH,A,SIZE>E0050000]
MODS EIS>[E15,008,SORTLIB,N],E16>[E16,024,SORTLIB,N]
/*
//C9897P EXEC C9603N,TIME>01,ACCT>D35322107
//CHG,TU12  DD  DISP>[KEEP],UNIT>[T+F1,1,DEFER],DSN>+A,9895405, CT12 1
//          VOL>SER>[+F1,A+F1,B+F1,C+F1,D+F1,E+F1,F+F1,G+F1,H+F1,
//          I+F1,J+F1,K+F1,L+F1,M+F1,N+F1,O+F1,P+F1,Q+F1,R+F1,S+F1] T12 2
//          DCB>[LRECL>0090,BLKSIZE>2700]
//CHG,TPRIN  DD  *,SPACE>[TRK,[1,1]]
T/P  TU12    1020090Z090
/*      PLACE T/P CONTROL CARDS BEFORE THIS CARD

```

### 6.1.3 66-1 MERGE

```

//C9897M JOB 01: G. WANG : ,PRTY>02,TPRUN>HOLD
//C9897 EXEC P9023N,TIME>10,ACCT>D35323007
//CHG,SORTIN01 DU  DISP>[KEEP],UNIT>[T+F5,1,DEFER],DSN>+E,9895405, CT22 1
//          VOL>SER>[+F5,A+F5,B+F5,C+F5,D+F5,E+F5,F+F5,G+F5,H+F5,
//          I+F5,J+F5,K+F5,L+F5,M+F5,N+F5,O+F5,P+F5,Q+F5,R+F5,S+F5],CT22 2
//          DCB>[LRECL>0090,BLKSIZE>2700],LABEL>X,NSL,RETPD>001]
//CHG,SORTIN02 DU  DISP>[KEEP],UNIT>[T+F6,1,DEFER],DSN>+F,9895405, CT23 1
//          VOL>SER>[+F6,A+F6,B+F6,C+F6,D+F6,E+F6,F+F6,G+F6,H+F6,
//          I+F6,J+F6,K+F6,L+F6,M+F6,N+F6,O+F6,P+F6,Q+F6,R+F6,S+F6],CT23 2
//          DCB>[LRECL>0090,BLKSIZE>2700],LABEL>X,NSL,RETPD>001]
//CHG,SORTIN03 DU  DISP>[KEEP],UNIT>[T+F7,1,DEFER],DSN>+G,9895405, CT24 1
//          VOL>SER>[+F7,A+F7,B+F7,C+F7,D+F7,E+F7,F+F7,G+F7,H+F7,
//          I+F7,J+F7,K+F7,L+F7,M+F7,N+F7,O+F7,P+F7,Q+F7,R+F7,S+F7],CT24 2
//          DCB>[LRECL>0090,BLKSIZE>2700],LABEL>X,NSL,RETPD>001]
//CHG,SORTIN04 DU  DISP>[KEEP],UNIT>[T+F8,1,DEFER],DSN>+H,9895405, CT25 1
//          VOL>SER>[+F8,A+F8,B+F8,C+F8,D+F8,E+F8,F+F8,G+F8,H+F8,
//          I+F8,J+F8,K+F8,L+F8,M+F8,N+F8,O+F8,P+F8,Q+F8,R+F8,S+F8],CT25 2
//          DCB>[LRECL>0090,BLKSIZE>2700],LABEL>X,NSL,RETPD>001]
//CHG,SORTIN05 DU  DISP>[KEEP],UNIT>[T+F2,1,DEFER],DSN>+B,9895405, CT13 1
//          VOL>SER>[+F2,A+F2,B+F2,C+F2,D+F2,E+F2,F+F2,G+F2,H+F2,
//          I+F2,J+F2,K+F2,L+F2,M+F2,N+F2,O+F2,P+F2,Q+F2,R+F2,S+F2],CT13 2
//          DCB>[LRECL>0090,BLKSIZE>2700],LABEL>X,NSL,RETPD>001]
//CHG,SORTIN06 DU  DISP>[KEEP],UNIT>[T+F3,1,DEFER],DSN>+C,9895405, CT14 1
//          VOL>SER>[+F3,A+F3,B+F3,C+F3,D+F3,E+F3,F+F3,G+F3,H+F3,
//          I+F3,J+F3,K+F3,L+F3,M+F3,N+F3,O+F3,P+F3,Q+F3,R+F3,S+F3],CT14 2
//          DCB>[LRECL>0090,BLKSIZE>2700],LABEL>X,NSL,RETPD>001]
//CHG,SORTIN07 DD  DISP>[KEEP],UNIT>[T+F4,1,DEFER],DSN>+D,9895405, CT15 1
//          VOL>SER>[+F4,A+F4,B+F4,C+F4,D+F4,E+F4,F+F4,G+F4,H+F4,
//          I+F4,J+F4,K+F4,L+F4,M+F4,N+F4,O+F4,P+F4,Q+F4,R+F4,S+F4],CT15 2
//          DCB>[LRECL>0090,BLKSIZE>2700],LABEL>X,NSL,RETPD>001]
//CHG,SORTOUT DU  DISP>[KEEP],UNIT>[T+F1,1,DEFER],DSN>+A,9895405, CT12 1
//          VOL>SER>[+F1,A+F1,B+F1,C+F1,D+F1,E+F1,F+F1,G+F1,H+F1,
//          I+F1,J+F1,K+F1,L+F1,M+F1,N+F1,O+F1,P+F1,Q+F1,R+F1,S+F1],CT12 2
//          DCB>[LRECL>0090,BLKSIZE>2700]
//CHG,SYSIN  DD  *,DCB>BLKSIZE>0080,SPACE>[TRK,[1,1]]
MERGE FIELDS>[015,008,CH,A,086,004,CH,A,046,005,CH,A,053,003,CH,A, C
          051,002,CH,A,056,029,CH,A,023,023,CH,A]
/*

```



```

50440      WRITE OUTREC FROM NINES.
50450      ADD 1 TO KNT.
50460      IF KNT IS LESS THAN 30 GO TO NINE-FILL.
50470      GO TO CLOSE-FILES.
/*        PLACE COBOL SOURCE BEFORE THIS CARD
//CHG.TFGIN  DU  *SPACE>[CYL,(1,1)]
/*        PLACE TFG DATA BEFORE THIS CARD
//TPR.TU12   DU  DISP>[OLD,KEEP],VOL>SER>+FI,UNIT>T+FI
//TPR.TU22   DD  DISP>[OLD,KEEP],VOL>SER>+F5,UNIT>T+F5
//TPR.TPRIN  DD  *SPACE>[TRK,(1,1)]
T/P  TU22    10100902090
/*        PLACE T/P CONTROL CARDS BEFORE THIS CARD

```

C98970  
C98970  
C98970  
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1440 CDS

T12

T22

## 6.1.5 66-1 COPY ACCEPTABLE AIRCRAFT

```

//19897F JOB 01: G. WANG, :PRTY>02,TPRUN>HOLD
//C98970 EXEC P9655L,TIME>10,ACCT>D35323007
//CHG.TU14   DU  DISP>[KEEP],UNIT>[T+F3,1,DEFER],DSN>+C,9895440, CT14 1
//          VOL>SER>[+F3,A+F3,B+F3,C+F3,D+F3,E+F3,F+F3,G+F3,H+F3, CT14 2
//          I+F3,J+F3,K+F3,L+F3,M+F3,N+F3,O+F3,P+F3,Q+F3,R+F3,S+F3] T14 3
//CHG.TU22   DU  DISP>[PASS],UNIT>[T+F5,1,DEFER],DSN>+E,9895440, CT22 1
//          VOL>SER>[+F5,A+F5,B+F5,C+F5,D+F5,E+F5,F+F5,G+F5,H+F5, CT22 2
//          I+F5,J+F5,K+F5,L+F5,M+F5,N+F5,O+F5,P+F5,Q+F5,R+F5,S+F5] T22 3
//CHG.INPUT  DU  *SPACE>[CYL,(1,1)]
//          COMLINE  COMPILE
//          O. WANG.
00000      COMLINE  COMPILE
01040      DATE-WRITTEN. 5 JAN 72.
01050      REMARKS.
01060      66-1 COPY ACCEPTABLE AIRCRAFT.
02000      ENVIRONMENT DIVISION.
02010      CONFIGURATION SECTION.
02020      SOURCE-COMPUTER. IBM-360.
02030      OBJECT-COMPUTER. IBM-360.
02100      INPUT-OUTPUT SECTION.
02110      FILE-CONTROL.
02120          SELECT INFILE          ASSIGN TO UT-S-TU14
02130          RESERVE 1 ALTERNATE AREA.
02140          SELECT OUTFILE         ASSIGN TO UT-S-TU22
02150          RESERVE 1 ALTERNATE AREA.
02160          SELECT ACCEPT-FILE     ASSIGN TO DA-S-OT01
02170          RESERVE 1 ALTERNATE AREA.
10000      DATA DIVISION.
10010      FILE SECTION.
10100      FD  INFILE
10120          RECORDING MODE IS F
10130          BLOCK CONTAINS 30 RECORDS
10140          RECORD CONTAINS 90
10150          LABEL RECORDS ARE OMITTED
10160          DATA RECORDS ARE INDATA.
10170      01  INDATA SYNC.
10178      02  DATA8.
10180      03  DATA1          PICTURE XX.
10190      03  TYPE           PICTURE X(4).
10200      03  DATA2          PICTURE X(8).
10210      02  SER-NO         PICTURE X(8).
10220      02  DATA3          PICTURE X(18).
10228      02  DATE-IN.
10230      03  DAY            PICTURE 99.
10240      03  MONTH          PICTURE 99.
10250      03  YEAR           PICTURE 9.
10258      02  DATA7.
10260      03  WUC            PICTURE X(5).
10270      03  ACTION          PICTURE X.
10280      03  WD              PICTURE X.
10290      03  HOW-MAL         PICTURE X(3).
10300      03  DATA4          PICTURE X(27).
10310      03  REC-ID          PICTURE X.
10320      03  THM             PICTURE X.
10330      03  DATA5          PICTURE X.
10340      02  FILLER          PICTURE XXXX.
10350      02  DATA6          PICTURE X.
11100      FD  OUTFILE
11120          RECORDING MODE IS F
11130          BLOCK CONTAINS 30 RECORDS
11140          RECORD CONTAINS 90
11150          LABEL RECORDS ARE OMITTED
11160          DATA RECORDS ARE OUTDATA.
11170      01  OUTDATA SYNC.
11178      02  DATA8-OUT.
11180      03  DATA1-OUT       PICTURE XX.
11190      03  TYPE-OUT         PICTURE X(4).
11200      03  DATA2-OUT       PICTURE X(8).

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1440 CDS

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52010	COMPUTE KOUNT > RECORDS-PASS - [(RECORDS-PASS / 30) * 30].	C98970
52020	IF KOUNT EQUAL ZERO GO TO CLOSE-FILES.	C98970
52040	LOOP3.	C98970
52050	WRITE OUTDATA FROM NINE.	C98970
52060	ADD 1 TO KOUNT.	C98970
52070	IF KOUNT IS LESS THAN 30 GO TO LOOP3.	C98970
52100	CLOSE-FILES.	C98970
52110	CLOSE INFILE WITH LOCK, ACCEPT-FILE WITH LOCK.	C98970
52120	CLOSE OUTFILE WITH LOCK.	C98970
52140	DISPLAY : NUMBER OF RECORDS READ : RECORDS-READ.	C98970
52150	UPON CONSOLE.	C98970
52160	DISPLAY : NUMBER OF RECORDS PASSED : RECORDS-PASS	C98970
52170	UPON CONSOLE.	C98970
52180	DISPLAY : EOJ C9897 : UPON CONSOLE.	C98970
52190	GOBACK.	C98970
70000	READ-ACCEPT-DATA.	C98970
70010	READ ACCEPT-FILE AT END GO TO END-R-A-D.	C98970
70020	MOVE DATA-1 TO NO-ACCEPT-A-C.	C98970
70030	MOVE ZERO TO KNT.	C98970
70040	RAD-1.	C98970
70050	ADD 1 TO KNT.	C98970
70060	READ ACCEPT-FILE AT END GO TO END-R-A-D.	C98970
70070	MOVE DATA-2 TO ACCEPT-A-C (KNT).	C98970
70080	IF KNT IS LESS THAN NO-ACCEPT-A-C GO TO RAD-1.	C98970
70090	MOVE ACCEPT-A-C (1) TO TEMP-ACCEPT-A-C.	C98970
70100	END-R-A-D, EXIT.	C98970
/*	PLACE COBOL SOURCE BEFORE THIS CARD	
//CHG,TFGIN	DD *SPACE>[CYL,(1,1)]	
IFG DT01	11 0202080	1440 CDS
150		
57000231		
57000232		
57000235		
57000236		
57000237		
57000243		
57000244		
57002455		
57002456		
57002458		
57002459		
57002463		
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57002491		
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57002494		
57002496		
57002503		
57002504		
57002505		
57002508		
57002509		
57002515		
57002517		
57002520		
57002524		
57002527		
57002528		
57002532		
57002533		
57002537		
57002538		
57002540		
57002543		
57002545		
57002546		
58000760		
58000766		
58000767		
58000772		
58000773		
58000776		
58000777		
5800077A		
58000780		
58000781		
58000783		
58000785		
58000786		

58000768  
58000792  
58000797  
58000900  
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59000151  
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59000155  
59000157  
59000164

\*END

/\* PLACE TFG DATA BEFORE THIS CARD

//TPR.TU14 DD DISP>[OLD,KEEP],VOL>SER>+FS,UNIT>T+FS

T14

//TPR.TU22 DD DISP>[OLD,KEEP],VOL>SER>+FS,UNIT>T+FS

T22

//TPR.TPRIN DD +,SPACE>[TRK,[1,1]]

T/P DT01 10200802080

/\* PLACE T/P CONTROL CARDS BEFORE THIS CARD



## 6.2 65-110 FILE GENERATION PROGRAMS

### 6.2.1 65-110 SCREEN

```

//C98976 JOB 01:1 6 WANG 1,PRTY>02,TYPRUN>HOLD
//C98976 EXEC PY655L,TIME>01,ACCT>035323007
//CHG.TU22 DD UISP>C,PASS>J,UNIT>T+FB>1,DEFEN>J,DSN>E.98V5410. CT22 1
// VOL>SER>C+FB>J,DCU>DEN>2,TRTCH>ET,EROPT>SKP,LABEL>C,ML
//CHG.INPUT DU +,SPACE>CYL>C(1,1) 1440 COS
00000 COMBINE COMPILE 0, WANG, C98970
01000 DATA-WRITTEN. 24 DEC 71. C98970
01050 REMARKS. C98970
01060 SCREEN 05-110 DATA TAPE. C98970
02000 ENVIRONMENT DIVISION. C98970
02010 CONFIGURATION SECTION. C98970
02020 SOURCE-COMPUTER. IBM-360. C98970
02030 OBJECT-COMPUTER. IBM-360. C98970
02100 INPUT-OUTPUT SECTION. C98970
02110 FILE-CONTROL. C98970
02120 SELECT INFILE ASSIGN TO UT-5-TU22 C98970
02130 RESUME I ALTERNATE AREA. C98970
02140 SELECT OUTFILE ASSIGN TO DA-5-DT02 C98970
02150 RESUME I ALTERNATE AREA. C98970
02160 SELECT INDATA ASSIGN TO DA-5-DT01 C98970
02170 RESUME I ALTERNATE AREA. C98970
10000 DATA DIVISION. C98970
10010 FILE SECTION. C98970
10100 FD INFILE C98970
10110 C98970
10120 RECORDING MODE IS F C98970
10130 BLOCK CONTAINS 50 RECORDS C98970
10140 RECORD CONTAINS 60 CHARACTERS C98970
10150 LABEL RECORDS ARE OMITTED C98970
10160 DATA RECORDS ARE INREC. C98970
10170 01 INREC SYNC. C98970
10180 02 TYPE PICTURE X(4). C98970
10190 02 DATA1. C98970
10192 03 FILLER PICTURE X(24). C98970
10194 03 MC PICTURE X. C98970
10196 03 FILLER PICTURE X(4). C98970
10198 03 WUC PICTURE X(5). C98970
10200 02 SER-NO PICTURE X(8). C98970
10210 02 DATA3 PICTURE XX. C98970
10212 02 FILLER PICTURE XXXX. C98970
10214 02 DATA4 PICTURE X. C98970
10220 02 YEAR PICTURE 99. C98970
10225 02 YEARE REDEFINES YEAR. PICTURE XX. C98970
10226 02 FILLER REDEFINES YEAR. C98970
10227 03 FILLER PICTURE X. C98970
10228 03 YEAR1 PICTURE 9. C98970
10230 02 DAY PICTURE 999. C98970
10231 02 DAYC REDEFINES DAY. PICTURE XXX. C98970
10232 02 FILLER REDEFINES DAY. C98970
10233 03 FILLER PICTURE X. C98970
10234 03 DAY2 PICTURE 99. C98970
10235 02 FILLER REDEFINES DAY. C98970
10236 03 FILLER PICTURE XX. C98970
10237 03 DAY1 PICTURE 9. C98970
10240 02 DATA5 PICTURE XX. C98970
10300 FD OUTFILE C98970
10310 RECORDING MODE IS F C98970
10320 BLOCK CONTAINS 50 RECORDS C98970
10330 RECORD CONTAINS 60 CHARACTERS C98970
10340 LABEL RECORDS ARE STANDARD C98970
10350 DATA RECORDS ARE OUTREC. C98970
10360 01 OUTREC SYNC. C98970
10370 02 TYPE-OUT PICTURE X(4). C98970
10380 02 DATA1-OUT PICTURE X(34). C98970
10390 02 SER-OUT PICTURE X(8). C98970
10400 02 DATA2-OUT PICTURE XX. C98970
10410 02 DAY-OUT PICTURE 9999. C98970
10420 02 DATA4-OUT PICTURE X. C98970
10430 02 YEAR-OUT PICTURE 99. C98970
10440 02 DAY-OUT PICTURE 999. C98970
10450 02 DATA5-OUT PICTURE XX. C98970
11000 FD INDATA C98970
11010 RECORDING MODE IS F C98970
11020 BLOCK CONTAINS 50 RECORDS C98970
11030 RECORD CONTAINS 60 CHARACTERS C98970
11040 LABEL RECORDS ARE STANDARD C98970
11050 DATA RECORDS ARE DATA-IN. C98970
11100 01 DATA-IN SYNC. C98970
11110 02 SCREEN-DATA-IN PICTURE X(80). C98970
11120 02 FILLER REDEFINES SCREEN-DATA-IN. C98970
11130 03 DATA-I PICTURE X(4). C98970
11140 03 FILLER PICTURE X(76). C98970

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50470      MOVE YEAR TO YEAR-OUT.          C98970
50480      MOVE UAY TO DAY-OUT.            C98970
50490      MOVE UATAS TO DATAS-OUT.        C98970
50500      WRITE OUTREC.                   C98970
50510      ADD 1 TO RECORDS-PASS.           C98970
50515      IF RECORDS-PASS IS GREATER THAN 100 GO TO BLOCK-CHECK. C98970
50520      GO TO READ1.                   C98970
50600      BLOCK-CHECK.                   C98970
50610      COMPUTE KOUNT > RECORDS-PASS - [(RECORDS-PASS / 50) * 50]. C98970
50620      IF KOUNT EQUAL ZERO GO TO CLOSE-FILES. C98970
50640      LOOP1.                          C98970
50650      WRITE OUTREC FROM NINE.         C98970
50660      ADD 1 TO KOUNT.                 C98970
50670      IF KOUNT IS LESS THAN 50 THEN GO TO LOOP1. C98970
50800      CLOSE-FILES.                   C98970
50810      CLOSE INFILE WITH LOCK, INDATA WITH LOCK. C98970
50820      CLOSE OUTFILE WITH LOCK.       C98970
50840      DISPLAY : NUMBER RECORDS READ : RECORDS-READ UPON CONSOLE. C98970
50850      DISPLAY : NUMBER RECORDS PASS : RECORDS-PASS UPON CONSOLE. C98970
50860      DISPLAY : EOJ 9897 : UPON CONSOLE. C98970
50870      GORACK.                        C98970
51000      SCREEN-DATA.                   C98970
51010      READ INDATA AT END GO TO END-S-D. C98970
51020      MOVE UATA-1 TO A-C-TYPE.        C98970
51050      READ INDATA AT END GO TO END-S-D. C98970
51060      MOVE UATA-2 TO NO-A-C.          C98970
51070      MOVE ZK0 TO KOUNT.              C98970
51080      S-D-1.                          C98970
51090      ADD 1 TO KOUNT.                 C98970
51100      READ INDATA AT END GO TO END-S-D. C98970
51110      MOVE TAIL-NO TO REJ-S-N [KOUNT]. C98970
51120      IF KOUNT IS LESS THAN NO-A-C GO TO S-D-1. C98970
51130      READ INDATA AT END GO TO END-S-D. C98970
51140      MOVE TAIL-NO TO LOW-S-N.         C98970
51150      READ INDATA AT END GO TO END-S-D. C98970
51160      MOVE TAIL-NO TO HIGH-S-N.        C98970
51170      READ INDATA INTO MC-WUC-REC, AT END GO TO END-S-D. C98970
51190      END-S-D. EXIT.                  C98970
80000      INSERT-WUC.                    C98970
80010      IF MC IS EQUAL TO MC-1 THEN MOVE PERIODIC-INSP TO WUC. C98970
80020      IF MC IS EQUAL TO MC-2 THEN MOVE WRLY-P-F-INSP TO WUC. C98970
/*      PLACE COBOL SOURCE BEFORE THIS CARD
//CH6.TFGIN DD *.SPACE>[CYL,[1,1]]
00000      GET TFG
010001 019999 REPLACE
TFG DT01 11 0202080
F106      A-C TYPE
13        NUMBER REJ A-C
57000234
57000239
57000240
57001523
57002507
57002513
57002516
57002519
57002523
57002529
58000795
59000061
59000150
57000001 LOW S-N
59999999 HIGH S-N
C03400    U63300
*END
/*      PLACE TFG DATA BEFORE THIS CARD
//TPR.TU22 DD DISP>[OLD,KEEP],VOL>SER>+FB,UNIT>T+FB,
//        DCB>[DEN>2,TRTCH>ET,EROPT>SNP],LABEL>[,NL]
//TPR.TPRIN DD *.SPACE>[TRK,[1,1]]
T/P DT01 10100802080
T/P DT02 10200602060
/*      PLACE T/P CONTROL CARDS BEFORE THIS CARD

```

1440 CDS  
C98970 'T  
'T

CT22

## 6.2.2 65-110 SORT

```
//C9897L JOB 01: G. WANG : ,PRTY>02, TYPRUN>HOLD
//C9897S EXEC P9622H, W>199, TIME>03, ACCT>D35323007
//CHG. SORTIN DU DISP>[KEEP], UNIT>[T+F5, I, DEFER], CT22 1
// DSN>+E, 9895415, CT22 2
// VOL>SER>[+F5, A+F5, B+F5, C+F5, D+F5, E+F5, F+F5, G+F5, H+F5, CT22 3
// I+F5, J+F5, K+F5, L+F5, M+F5, N+F5, O+F5, P+F5, Q+F5, R+F5, S+F5], CT22 4
// DCB>[LRECL>0060, BLKSIZE>3000], LABEL>[NSL, RETPD>099]
//CHG. SORTOUT DU DISP>[KEEP], UNIT>[T+F1, I, DEFER], DSN>+A, 9895425, CT12 1
// VOL>SER>[+F1, A+F1, B+F1, C+F1, D+F1, E+F1, F+F1, G+F1, H+F1, CT12 2
// I+F1, J+F1, K+F1, L+F1, M+F1, N+F1, O+F1, P+F1, Q+F1, R+F1, S+F1], CT12 3
// DCB>[LRECL>0060, BLKSIZE>3000]
//CHG. SYSIN DD * , DCB>BLKSIZE>0080, SPACE>[TRK, [1, 1]]
SORT FIELDS>[039, 008, CH, A, 049, 004, CH, A, 059, 001, CH, A, 034, 005, CH, A, C
029, 008, CH, A, 001, 028, CH, A, 030, 004, CH, A], SIZE>E0500000
MODS E15>[E15, 008, SORTLIB, N], E18>[E18, 024, SORTLIB, N]
/*
//C9897P EXEC C9603N, TIME>01, ACCT>D35322107
//CHG. TU12 DU DISP>[KEEP], UNIT>[T+F1, I, DEFER], DSN>+A, 9895425, CT12 1
// VOL>SER>[+F1, A+F1, B+F1, C+F1, D+F1, E+F1, F+F1, G+F1, H+F1, CT12 2
// I+F1, J+F1, K+F1, L+F1, M+F1, N+F1, O+F1, P+F1, Q+F1, R+F1, S+F1] T12 3
//CHG. TPRIN DD * , SPACE>[TRK, [1, 1]]
T/P TU12 10200602060
/* PLACE T/P CONTROL CARDS BEFORE THIS CARD
```

## 6.2.3 65-110 MERGE

```
//C9897N JOB 01: G. WANG. : ,PRTY>02, TYPRUN>HOLD
//C9897 EXEC P9625N, TIME>03, ACCT>D35323007
//CHG. SORTIN01 DU DISP>[KEEP], UNIT>[A+F5, 2, DEFER], DSN>+E, 9895425, CT22/23 1
// VOL>SER>[+F5, A+F5, B+F5, C+F5, D+F5, E+F5, F+F5, G+F5, H+F5, CT22 2
// I+F5, J+F5, K+F5, L+F5, M+F5, N+F5, O+F5, P+F5, Q+F5, R+F5, S+F5], CT22 3
// DCB>[LRECL>0060, BLKSIZE>3000], LABEL>[NSL, RETPD>099]
//CHG. SORTIN02 DU DISP>[KEEP], UNIT>[A+F7, 2, DEFER], DSN>+G, 9895425, CT24/25 1
// VOL>SER>[+F7, A+F7, B+F7, C+F7, D+F7, E+F7, F+F7, G+F7, H+F7, CT24 2
// I+F7, J+F7, K+F7, L+F7, M+F7, N+F7, O+F7, P+F7, Q+F7, R+F7, S+F7], CT24 3
// DCB>[LRECL>0060, BLKSIZE>3000], LABEL>[NSL, RETPD>099]
//CHG. SORTIN03 DD DISP>[KEEP], UNIT>[A+F3, 2, DEFER], DSN>+C, 9895430, CT14/15 1
// VOL>SER>[+F3, A+F3, B+F3, C+F3, D+F3, E+F3, F+F3, G+F3, H+F3, CT14 2
// I+F3, J+F3, K+F3, L+F3, M+F3, N+F3, O+F3, P+F3, Q+F3, R+F3, S+F3], CT14 3
// DCB>[LRECL>0060, BLKSIZE>3000], LABEL>[NSL, RETPD>099]
//CHG. SORTOUT DD DISP>[KEEP], UNIT>[A+F1, 2, DEFER], DSN>+A, 9895430, CT12/13 1
// VOL>SER>[+F1, A+F1, B+F1, C+F1, D+F1, E+F1, F+F1, G+F1, H+F1, CT12 2
// I+F1, J+F1, K+F1, L+F1, M+F1, N+F1, O+F1, P+F1, Q+F1, R+F1, S+F1], CT12 3
// DCB>[LRECL>0060, BLKSIZE>3000]
//CHG. SYSIN DD * , DCB>BLKSIZE>0080, SPACE>[TRK, [1, 1]]
MERGE FIELDS>[039, 008, CH, A, 049, 004, CH, A, 059, 001, CH, A, 034, 005, CH, A, C
029, 001, CH, A]
/*
```

## 6.2.4 65-110 ELIMINATE DUPLICATE RECORDS

```
//C9897P JOB 01: G. WANG : ,PRTY>02, TYPRUN>HOLD
//C9897D JOB 01: G. WANG : ,PRTY>02, TYPRUN>HOLD
//C9897S EXEC P9655L, TIME>10, ACCT>D35323007
//CHG. TU12 DU DISP>[PASS], UNIT>[T+F1, I, DEFER], DSN>+A, 9895430, CT12 1
// VOL>SER>[+F1, A+F1, B+F1, C+F1, D+F1, E+F1, F+F1, G+F1, H+F1, CT12 2
// I+F1, J+F1, K+F1, L+F1, M+F1, N+F1, O+F1, P+F1, Q+F1, R+F1, S+F1] T12 3
//CHG. TU14 DU DISP>[PASS], UNIT>[T+F3, I, DEFER], DSN>+C, 9895440, CT14 1
// VOL>SER>[+F3, A+F3, B+F3, C+F3, D+F3, E+F3, F+F3, G+F3, H+F3, CT14 2
// I+F3, J+F3, K+F3, L+F3, M+F3, N+F3, O+F3, P+F3, Q+F3, R+F3, S+F3] T14 3
//CHG. INPUT DD * , SPACE>[CYL, [1, 1]] 1440 CDS
00000 COMBINE COMPILE G. WANG. C98970
01050 DATE-WRITTEN. 27 DEC 71. C98970
01060 REMARKS. PROGRAM SIFTS 65-110 FILE TO ELIMINATE DUPLICATE C98970
01070 ADJACENT RECORDS. C98970
02000 ENVIRONMENT DIVISION. C98970
02010 CONFIGURATION SECTION. C98970
02020 SOURCE-COMPUTER. IBM-360. C98970
02030 OBJECT-COMPUTER. IBM-360. C98970
02100 INPUT-OUTPUT SECTION. C98970
02110 FILE-CONTROL. C98970
02120 SELECT INFILE ASSIGN TO UT-S-TU12 C98970
02130 RESERVE 1 ALTERNATE AREA. C98970
02140 SELECT OUTFILE ASSIGN TO UT-S-TU14 C98970
02150 RESERVE 1 ALTERNATE AREA. C98970
```



## 6.2.5 65-110 COPY ACCEPTABLE AIRCRAFT

```

//C9897F JOB 01:G. WANG 1,PTY>04,TPRUN>HOLD
//C9897 EXEC P965SL,TIME>05,ACCT>D35323007
//CHG.TU12 DU DISP>E,PASS>J,UNIT>T+T+1,DEPER>J,DSN>+A,9895435, C712 1
// VOL>SER>[+F1,A+FI,B+FI,C+FI,D+FI,E+FI,F+FI,G+FI,H+FI, C712 2
// I+FI,J+FI,K+FI,L+FI,M+FI,N+FI,O+FI,P+FI,Q+FI,R+FI,S+FI] T12 3
// DU DISP>E,PASS>J,UNIT>T+T+1,DEPER>J,DSN>+C,9895440, CT14 1
// VOL>SER>[+F3,A+FI,B+FI,C+FI,D+FI,E+FI,F+FI,G+FI,H+FI, CT14 2
// I+FI,J+FI,K+FI,L+FI,M+FI,N+FI,O+FI,P+FI,Q+FI,R+FI,S+FI] T14 3
//CHG.INPUT DU //SPACE>[C,L,1,1]] 1440 COS
00000 COMBINE COMPILE G. WANG, C98970
01040 DATE-WRITTEN: 29 DEC 71. C98970
01050 REMARKS. C98970
01060 65-110 COPY ACCEPTABLE AIRCRAFT. C98970
02000 ENVIRONMENT DIVISION. C98970
02010 CONFIGURATION SECTION. C98970
02020 SOURCE-COMPUTER. IBM-360. C98970
02030 OBJECT-COMPUTER. IBM-360. C98970
02100 INPUT-OUTPUT SECTION. C98970
02110 FILE-CONTROL. C98970
02120 SELECT INFILE ASSIGN TO UT-S-TU14 C98970
02130 RESERVE 1 ALTERNATE AREA. C98970
02140 SELECT OUTFILE ASSIGN TO UT-S-TU12 C98970
02150 RESERVE 1 ALTERNATE AREA. C98970
02160 SELECT ACCEPT-FILE ASSIGN TO DA-S-0701 C98970
02170 RESERVE 1 ALTERNATE AREA. C98970
10000 DATA DIVISION. C98970
10010 FILE SECTION. C98970
10100 PU INFILE C98970
10110 C98970
10120 RECURRING MODE IS F C98970
10130 BLOCK CONTAINS 50 RECORDS C98970
10140 RECORD CONTAINS 60 CHARACTERS C98970
10150 LABEL RECORDS ARE OMITTED C98970
10160 DATA RECORDS ARE INREC. C98970
10170 01 INREC SYNC. C98970
10180 02 TPL PICTURE X(4). C98970
10190 02 DATA1. C98970
10192 03 FILLER PICTURE X(24). C98970
10194 03 MC PICTURE X. C98970
10196 03 FILLER PICTURE X(4). C98970
10198 03 NUC PICTURE X(5). C98970
10200 02 SER-NO PICTURE X(8). C98970
10210 02 DATA3 PICTURE XX. C98970
10212 02 FILLER PICTURE XXXX. C98970
10214 02 DATA4 PICTURE X. C98970
10220 02 YEAM PICTURE 99. C98970
10222 02 YEAMC REDEFINES YEAR PICTURE XX. C98970
10224 02 FILLER REDEFINES YEAR. C98970
10226 03 FILLER PICTURE X. C98970
10228 03 YEAM1 PICTURE 9. C98970
10230 02 DAY PICTURE 999. C98970
10231 02 DAYC REDEFINES DAY PICTURE XXX. C98970
10232 02 FILLER REDEFINES DAY. C98970
10233 03 FILLER PICTURE X. C98970
10234 03 DAY2 PICTURE 99. C98970
10235 02 FILLER REDEFINES DAY. C98970
10236 03 FILLER PICTURE XX. C98970
10237 03 DAY1 PICTURE 9. C98970
10240 02 DATA5 PICTURE XX. C98970
10300 FU OUTFILE C98970
10310 RECURRING MODE IS F C98970
10320 BLOCK CONTAINS 50 RECORDS C98970
10330 RECORD CONTAINS 60 CHARACTERS C98970
10340 LABEL RECORDS ARE OMITTED C98970
10350 DATA RECORDS ARE OUTREC. C98970
10360 01 OUTREC SYNC. C98970
10370 02 TPL-OUT PICTURE X(4). C98970
10380 02 DATA1-OUT PICTURE X(24). C98970
10390 02 SER-OUT PICTURE X(8). C98970
10400 02 DATA3-OUT PICTURE XX. C98970
10410 02 DAY-OUT PICTURE 9999. C98970
10420 02 DATA4-OUT PICTURE X. C98970
10430 02 YEAM-OUT PICTURE 99. C98970
10440 02 DAY-OUT PICTURE 999. C98970
10450 02 DATA5-OUT PICTURE XX. C98970
11400 FJ ACCEPT-FILE C98970
11410 RECURRING MODE IS F C98970
11420 BLOCK CONTAINS 20 RECORDS C98970
11430 RECORD CONTAINS 80 CHARACTERS C98970
11440 LABEL RECORDS ARE STANDARD C98970
11450 DATA RECORDS ARE ACCEPT-REC. C98970
11460 01 ACCEPT-REC SYNC. C98970
11470 02 ACCEPT-DATA PICTURE X(80). C98970
11480 02 FILLER REDEFINES ACCEPT-DATA. C98970

```



50850	DISPLAY : NUMBER RECORDS PASS : RECORDS-PASS UPON CONSOLE.	C98970
50860	DISPLAY : EOJ 9897 : UPON CONSOLE.	C98970
50870	GORACK.	C98970
70000	READ-ACCEPT-DATA.	C98970
70010	READ ACCEPT-FILE AT END GO TO END-R-A-D.	C98970
70020	MOVE DATA-1 TO NO-ACCEPT-A-C.	C98970
70030	MOVE ZERO TO KNT.	C98970
70040	RAD-1.	C98970
70050	ADD 1 TO KNT.	C98970
70060	READ ACCEPT-FILE AT END GO TO END-R-A-D.	C98970
70070	MOVE DATA-2 TO ACCEPT-A-C (KNT).	C98970
70080	IF KNT IS LESS THAN NO-ACCEPT-A-C GO TO RAD-1.	C98970
70090	MOVE ACCEPT-A-C (1) TO TEMP-ACCEPT-A-C.	C98970
70100	END-R-A-D. EXIT.	C98970
/*	PLACE COBOL SOURCE BEFORE THIS CARD	
//CHG,TFGIN	DD *,SPACE>[CYL:[1,1]]	
TFG DT01	11 0202080	1440 CDS
150		
57000231		
57000232		
57000235		
57000236		
57000237		
57000243		
57000244		
57002455		
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\*END

/\* PLACE TFG DATA BEFORE THIS CARD

//TPR,TU12 DU DISP>(OLD,KEEP),VOL>SER>+F1,UNIT>T+F1

T12

//TPR,TU14 DU DISP>(OLD,KEEP),VOL>SER>+F3,UNIT>T+F3

T14

//TPR,TPRIN DU \*.SPACE>(TRK,(1,1))

T/P DT01 10200002080

T/P TU12 1ALL0002060

/\* PLACE T/P CONTROL CARDS BEFORE THIS CARD



30170	02	FILLER	PICTURE 999	VALUE 243.	C98970
30180	02	FILLER	PICTURE 999	VALUE 273.	C98970
30190	02	FILLER	PICTURE 999	VALUE 304.	C98970
30200	02	FILLER	PICTURE 999	VALUE 334.	C98970
30210	01	NO-DAYS-IN-YEAR	REDEFINES DAYS-IN-YEAR SYNC.		C98970
30220	02	NO DAYS OCCURS 12 TIMES			C98970
30230			PICTURE 999.		C98970
30240	01	DAYS-IN-YEARS SYNC.			C98970
30250	02	FILLER	PICTURE 9999	VALUE 0.	C98970
30260	02	FILLER	PICTURE 9999	VALUE 365.	C98970
30270	02	FILLER	PICTURE 9999	VALUE 730.	C98970
30280	02	FILLER	PICTURE 9999	VALUE 1095.	C98970
30290	02	FILLER	PICTURE 9999	VALUE 1461.	C98970
30300	02	FILLER	PICTURE 9999	VALUE 1826.	C98970
30310	02	FILLER	PICTURE 9999	VALUE 2191.	C98970
30320	02	FILLER	PICTURE 9999	VALUE 2556.	C98970
30330	02	FILLER	PICTURE 9999	VALUE 2922.	C98970
30340	02	FILLER	PICTURE 9999	VALUE 3287.	C98970
30350	02	FILLER	PICTURE 9999	VALUE 3652.	C98970
30360	02	FILLER	PICTURE 9999	VALUE 4017.	C98970
30370	01	DAY-IN-YEAR-TABLE	REDEFINES DAYS-IN-YEARS SYNC.		C98970
30380	02	DAY-YEAR OCCURS 12 TIMES			C98970
30390			PICTURE 9999.		C98970
30400	01	KOUNT	PICTURE S999	COMPUTATIONAL VALUE ZERO SYNC.	C98970
30410	01	KNT	PICTURE S999	COMPUTATIONAL VALUE ZERO SYNC.	C98970
30430	01	KYEAR	PICTURE S99	COMPUTATIONAL VALUE ZERO SYNC.	C98970
30440	01	DAYS	PICTURE S999	COMPUTATIONAL VALUE ZERO SYNC.	C98970
30450	01	RECORDS-READ	PICTURE 9(6)	SYNC VALUE ZERO.	C98970
30460	01	RECORDS-PASS	PICTURE 9(6)	SYNC VALUE ZERO.	C98970
30470	01	QMD-KNT	PICTURE 999	SYNC VALUE ZERO.	C98970
30500	01	SER-8-UGIT SYNC.			C98970
30510	02	POS-1-2	PICTURE XX.		C98970
30520	02	POS-3-4	PICTURE XX	VALUE :00:.	C98970
30530	02	POS-5	PICTURE X.		C98970
30540	02	POS-6	PICTURE X.		C98970
30550	02	POS-7	PICTURE X.		C98970
30560	02	POS-8	PICTURE X.		C98970
30570	01	MONTHS-IN-YEAR SYNC.			C98970
30580	02	FILLER	PICTURE XXX	VALUE :JAN:.	C98970
30590	02	FILLER	PICTURE XXX	VALUE :FEB:.	C98970
30600	02	FILLER	PICTURE XXX	VALUE :MAR:.	C98970
30610	02	FILLER	PICTURE XXX	VALUE :APR:.	C98970
30620	02	FILLER	PICTURE XXX	VALUE :MAY:.	C98970
30630	02	FILLER	PICTURE XXX	VALUE :JUN:.	C98970
30640	02	FILLER	PICTURE XXX	VALUE :JUL:.	C98970
30650	02	FILLER	PICTURE XXX	VALUE :AUG:.	C98970
30660	02	FILLER	PICTURE XXX	VALUE :SEP:.	C98970
30670	02	FILLER	PICTURE XXX	VALUE :OCT:.	C98970
30680	02	FILLER	PICTURE XXX	VALUE :NOV:.	C98970
30690	02	FILLER	PICTURE XXX	VALUE :DEC:.	C98970
30700	01	NO-MONTHS-IN-YEAR	REDEFINES MONTHS-IN-YEAR SYNC.		C98970
30710	02	NMO OCCURS 12 TIMES			C98970
30720			PICTURE XXX.		C98970
34000	01	OUT-FILE-AIE-WORK SYNC.			C98970
34010	02	FILLER	PICTURE X(9)	VALUE SPACE.	C98970
34020	02	WUC-OUT	PICTURE X(5)	VALUE SPACE.	C98970
34030	02	FILLER	PICTURE X(8)	VALUE SPACE.	C98970
34040	02	REPORT-CODE-OUT	PICTURE X	VALUE SPACE.	C98970
34050	02	FILLER	PICTURE X	VALUE SPACE.	C98970
34060	02	SER-8-DIG-OUT	PICTURE X(8)	VALUE SPACE.	C98970
34070	02	FILLER	PICTURE X(10)	VALUE SPACE.	C98970
34080	02	DOLLAR-SIGN	PICTURE XX	VALUE :\$ :	C98970
34090	02	DAY-NO	PICTURE 9(4)	VALUE ZEROS.	C98970
34100	02	FILLER	PICTURE X	VALUE SPACE.	C98970
34110	02	RCDMK-0	PICTURE X	VALUE :#:	C98970
35000	01	EXCPTFILE-WORK-1 SYNC.			C98970
35010	02	FILLER	PICTURE X	VALUE SPACE.	C98970
35020	02	RAN-M	PICTURE X(25)	VALUE	C98970
35030			: UNRECOGNIZABLE MONTH == 1.		C98970
35040	02	SER-8-D-EXC	PICTURE X(8)	VALUE SPACE.	C98970
35050	02	FILLER	PICTURE X(2)	VALUE SPACE.	C98970
35060	02	DAY-MO-YR-EXC	PICTURE X(7)	VALUE SPACE.	C98970
35070	02	FILLER	PICTURE X(36)	VALUE SPACE.	C98970
35080	02	RECMAR	PICTURE X	VALUE :#:	C98970
35100	01	EXCPTFILE-WORK-2 SYNC.			C98970
35110	02	FILLER	PICTURE X(43)	VALUE SPACE.	C98970
35120	02	REC-READ	PICTURE X(6)	VALUE IRC-IN>1.	C98970
35130	02	RCDS-IN	PICTURE 9(6).		C98970
35140	02	REC-PASS	PICTURE X(9)	VALUE 1/RCO-OUT>1.	C98970
35150	02	RCUS-OUT	PICTURE 9(6).		C98970
35160	02	RAD-MONTHS	PICTURE X(6)	VALUE 1/0-MO>1.	C98970
35170	02	Q-MOS	PICTURE 9(3).		C98970
35180	02	RKDMK	PICTURE X	VALUE :#:	C98970
50000		PROCEDURE DIVISION.			C98970

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50010 OPEN-FILES. C98970
50020 OPEN INPUT INCARD. C98970
50030 OPEN OUTPUT OUTFILE. C98970
50035 OPEN OUTPUT EXCPTFILE. C98970
50040 READ1. C98970
50050 READ INCARD C98970
50060 AT END GO TO BLOCK-CHECK. C98970
50070 ADD 1 TO RECORDS-READ. C98970
50080 TEST-SER-NO-COLS-S-8. C98970
50090 IF SER-C5 EQUAL SPACE C98970
50100 MOVE ZERO TO SER-C5. C98970
50110 IF SER-C6 EQUAL SPACE C98970
50120 MOVE ZERO TO SER-C6. C98970
50130 IF SER-C7 EQUAL SPACE C98970
50140 MOVE ZERO TO SER-C7. C98970
50150 IF SER-C8 EQUAL SPACE C98970
50160 MOVE ZERO TO SER-C8. C98970
50170 MOVE SER-2-3 TO POS-1-2. C98970
50180 MOVE SER-C5 TO POS-5. C98970
50190 MOVE SER-C6 TO POS-6. C98970
50200 MOVE SER-C7 TO POS-7. C98970
50210 MOVE SER-C8 TO POS-8. C98970
50220 DECODE-MONTH. C98970
50230 MOVE 1 TO KNT. C98970
50240 MO-LOC?. C98970
50250 IF KMO [KNT] EQUAL MONTH GO TO DATE-TO-DAYS. C98970
50260 ADD 1 TO KNT. C98970
50270 IF KNT IS LESS THAN 13 GO TO MO-LOOP. C98970
50280 BAU-MONTH. C98970
50290 MOVE SER-8-DIGIT TO SER-8-D-EXC. C98970
50300 MOVE DAY-MO-YR TO DAY-MO-YR-EXC. C98970
50310 ADD 1 TO QMO-KNT. C98970
50320 WRITE EXCPTFILE-MO FROM EXCPTFILE-WORK-1. C98970
50330 GO TO READ1. C98970
50400 DATE-TO-DAYS. C98970
50410 COMPUTE KYEAR > YR - 60. C98970
50420 COMPUTE DAYS > DA < KDAY [KNT]. C98970
50430 IF KYEAR EQUAL 4 GO TO LEAP-YEAR. C98970
50440 IF KYEAR EQUAL 8 GO TO LEAP-YEAR. C98970
50450 IF KYEAR EQUAL 12 GO TO LEAP-YEAR. C98970
50460 GO TO JULIAN-DAYS. C98970
50500 LEAP-YEAR. C98970
50510 IF KNT IS LESS THAN 3 GO TO JULIAN-DAYS. C98970
50520 ADD 1 TO DAYS. C98970
50540 JULIAN-DAYS. C98970
50550 COMPUTE DAY-NO > DAY-YEAR [KYEAR] < DAYS - 1461. C98970
51000 WRITE-OUTPUT. C98970
51010 MOVE WUC TO WUC-OUT. C98970
51020 MOVE REPORT-CODE TO REPORT-CODE-OUT. C98970
51030 MOVE SER-8-DIGIT TO SER-8-DIG-OUT. C98970
51040 WRITE OUTFILE-AIE FROM OUTFILE-AIE-WORK. C98970
51050 ADD 1 TO RECORDS-PASS. C98970
51060 GO TO READ1. C98970
52000 BLOCK-CHECK. C98970
52010 COMPUTE KOUNT > RECORDS-PASS - [(RECORDS-PASS / 60) * 60]. C98970
52020 IF KOUNT EQUAL ZERO GO TO WRITE-RECORD-KP. C98970
52040 LOOP3. C98970
52050 WRITE OUTFILE-AIE FROM NINE. C98970
52060 ADD 1 TO KOUNT. C98970
52070 IF KOUNT IS LESS THAN 60 GO TO LOOP3. C98970
52100 WRITE-RECORD-KP. C98970
52140 MOVE RECORDS-READ TO RCDS-IN. C98970
52150 MOVE RECORDS-PASS TO RCDS-OUT. C98970
52160 MOVE QMO-KNT TO Q-MOS. C98970
52180 WRITE EXCPTFILE-MO FROM EXCPTFILE-WORK-2. C98970
54000 CLOSE-FILES. C98970
54010 CLOSE INCARD WITH LOCK. C98970
54020 CLOSE EXCPTFILE WITH LOCK. C98970
54030 CLOSE OUTFILE WITH LOCK. C98970
54040 DISPLAY : EOL C9897 : UPON CONSOLE. C98970
54050 GORACK. C98970
/* PLACE COROL SOURCE BEFORE THIS CARD
//CHG,IFGIN DU *.SPACE>[CYL:[1,1]]
1440 CDS
IFG TUI4 11 0302080
56- 456 14JUN65 A1 13000 A RH MLG FAILURE,ACFT DESTROYED
56- 459 6MAR67 1 750E1 A SELECTOR VALVE FAILURE
56- 461 17OCT65 1 51E00 A ADI MATERIAL FAILURE
56-0461 14AUG68 1 14DC1 A HEP VALVE LEAK
56- 462 26JUL67 1 52DE1 A SHORTED FLT MODE CONTROL
56- 463 10MAY67 1 46NR1 A EJECTOR HOUSING ASSY MAT'L FAILURE
56-0463 15FEB68 1 138B1 A MALFUNCTION NG ACTUATING CYL
56- 465 17NOV67 1 45HA1 A SECOND HYD SYS ACCUMULATOR PUMP, FAILURE
57- 232 12JUL65 1 45EM1 A ACTUATOR FAILURE,PRESSURE LINE BROKE
57- 232 7OCT65 1 51EC1 A DISPLACEMENT GYRO MALFUNCTION
57-0235 3MAR66 1 46LA1 A PYLON ASSY MATERIAL FAILURE
57-0241 23FEB67 1 14JF1 A ACTUATOR FAILURE
57- 243 19JUG66 1 14JR1 A SPEED BRAKE & DRUG CHUTE LOST

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57-0482	29JUN67	I 75GE1	A MB-1 EJECTOR RACK MALFUNCTION
57-0781	11MAY66	I 42BA1	A DC GENERATOR FAILURE
57-2303	19CTC66	I 13UD1	A NG DOOR ACTUATOR MATERIAL FAILURE
57-2431	20OCT65	I 13DH1	A LEAKING BRAKE RELAY ABORT
57-2453	22MAR67	I 45EMI	A 'B'NUT FAILURE
57-2455	23SEP65	I 71C00	A TACAN MALFUNCTION
57-2456	28JUN67	I 75GE1	A MB-1 EJECTOR RACK MALFUNCTION
57-2457	3DEC66	I 14EA1	A BLEED AIR DUCT MATERIAL FAILURE
57-2457	22APR69	A1 23JB0	A MAIN GEAR ASSY HOUSING DESTROYED
57-2458	28SEP65	I 51AH1	A AD1 FAILURE
57-2459	29JUL66	I 14JR1	A LOST SPEED BRAKES AND DRAG CHUTE
57-2461	15SEP65	I 51E00	A AD1 FAILURE
57-2461	7OCT69	I 46CV1	A PILOT FLOAT VALVE MALFUNCTION
57-2464	6DEC67	I 14JA1	A LOST RH SPEED BRAKE
57-2465	21NOV67	A2 13HD1	A LH MLG MATERIAL FAILURE EYEBOLT ASSY PN 60245
57-2467	6DEC67	I 14JA1	A RH SPEED BRAKE MAT'L FAILURE
57-2467	16FEB70	I 13BA1	A EYEBOLT ASSY FAILURE MLG
57-2469	7DEC67	A1 23BD0	A N-2 COMPRESSOR SECTION FAILURE, ACFT DESTROYED
57-2472	7JAN67	I 23JA0	A QUICK DISCONNECT FAILURE
57-2475	17JAN67	I 23JA0	A QUICK DISCONNECT FAILURE
57-2476	24OCT66	I 13AAF	A GEAR LOCKING MECHANISM FAILURE
57-2478	13APR65	I 14JA1	A LOST SPEED BRAKES AND DRAG CHUTE
57-2478	30SEP65	I 51AJ1	A AD1 FAILURE
57-2480	9SEP65	I 51E00	A AD1 FAILURE
57-2482	27APR66	I 42BA1	A DC GENERATOR FAILURE
57-2482	9JUN67	I 42BA1	A 056 GENERATOR FAILURE
57-2483	13SEP65	I 51E00	A AD1 FAILURE
57-2485	14SEP65	I 51AJ1	A SWITCHING GYRO FAILURE
57-2487	8OCT65	I 51AH1	A AD1 MATERIAL FAILURE
57-2491	24OCT66	I 93AEA	A DRAG CHUTE MOVABLE JAW MALFUNCTION
57-2492	12JUL65	I 23HAD	A FUEL CONTROL MALFUNCTION
57-2492	3SEP65	I 51E00	A AD1 FAILURE
57-2492	11JUN70	A1 13BA1	A EYEBOLT ASSY FAILURE RH MLG
57-2499	15APR69	I 23SR0	A CSD OIL STARVATION
57-2500	27APR65	I 52C00	A AIR DATA COMP MALFUNCTION
57-2500	29NOV68	I 460A1	A LH FUEL SHUT-OFF VALVE FAILURE
57-2509	25SEP65	I 51EC1	A DISPL GYRO FAILURE
57-2514	4OCT65	I 51EA1	A AD1 FAILURE
57-2514	11OCT69	I 23NOE	A THROTTLE TELEFLEX CABLE BENT
57-2515	26JUN69	I 52CA1	A AIR DATA COMPUTER MALFUNCTION
57-2520	7SEP65	I 51AH1	A MD-1 GYRO REPLACED
57-2520	11SEP68	I 13EF1	A SWITCH ROLLER MLG MATERIAL FAILURE
57-2522	22AJG68	I 14CD1	A HOUSING, ELEVON TORQUE TUBE FAILURE
57-2523	15SEP65	I 51EC1	A DISPLACEMENT GYRO FAILURE
57-2526	26NOV65	I 23HAD	G MATERIAL MALFUNCTION
57-2526	11OCT66	I 23UC1	A HEP VALVE MALFUNCTION
57-2532	25OCT65	I 51AG1	A MALFUNCTION ALTITUDE INDICATOR
57-2535	30OCT65	I 51EA1	A AD1 FAILURE
57-2535	11MAY66	I 75UD1	A FWD PNEUMATIC SELECTOR VALVE FAILURE
57-2536	23MAY66	A1 45EE1	G FWD AIR FLASK MATERIAL FAILURE
57-2538	10MAY65	I 23GOR	A ENGINE EYELID ACTUATOR MALFUNCTION
57-2539	27OCT65	I 51AH1	A MATERIAL FAILURE
57-2543	23JUL68	I 45CH1	A RAT DOOR FELL OUT
57-2546	13MAY67	I 14JE1	A HYD RELIEF VALVE
57-2547	10JUN66	I 45CA1	A BROKEN PRI HYD LINE RAT DOOR
58- 090	28MAR69	I 45EC1	A PRIORITY CHECK VALVE
58- 759	4JUN66	I 46EAA	A EJECTOR ASSY FAILURE
58- 759	11APR67	A1 23JBC	A SCAVENGE PUMP FAILURE, ACFT DESTROYED
58- 760	17OCT65	I 51E00	A AD1 MATERIAL FAILURE
58- 765	8AUG65	I 51E00	A AD1 MALFUNCTION
58- 766	21JUN65	I 51E00	A AD1 FAILURE
58- 767	6MAY66	I 42BA1	A DC GENERATOR FAILURE
58-0768	2SEP69	A1 46JA1	A RH MAIN FUEL SHUT-OFF VALVE PN132305-1 DESTROYED
58- 769	10MAR66	A1 74JE1	A MA-1 DIGITAL COMPUTER FAILURE, ACFT DESTROYED
58- 773	6MAY65	I 14GE1	A THIM SWITCH MATERIAL FAILURE
58- 776	1SEP65	I 14AC1	G BELL CRANK FAILURE
58-0779	1JUN70	I 23HAD	G FUEL VALVE DEFECTIVE
58- 781	4APR67	I 21HAB	A WINSHEILD FAILED
58-0783	6DEC66	I 75BF1	G AFT SELECTOR VALVE MATERIAL FAILURE
58- 789	17MAR66	A1 14U00	A ELEVON PLUMBING MATERIAL FAILURE, ACFT DESTROYED
58- 790	18MAR67	I 41EA1	A MARMAN CLAMP CAME OFF
58- 902	6OCT67	I 75GE1	A MB-1 EJECTOR RACK MALFUNCTION
59-0006	17FEB66	I 23HAD	A FUEL CONTROL MALFUNCTION
59- 008	28OCT65	I 51AH1	A MATERIAL FAILURE
59- 009	18JUN66	I 52AA1	A STABILITY AUGMENTATION AMPLIFIER FAILED
59- 009	16JUL66	A1 13AAD	A LH MLG SIDE BRACE MATERIAL FAILURE
59- 011	10SEP65	A1 13AAA	A RH MLG STRUT FAILURE
59- 012	16MAR65	I 11H00	A CANOPY SEPARATED
59- 014	2NOV65	I 13DH1	A MATERIAL FAILURE-BRAKE RELAY VALVE
59- 014	24JAN66	I 23HAD	G FUEL CONTROL MALFUNCTION
59-0014	10MAR69	A1 14U00	A FLT CONTROL SYS MATERIAL FAILURE
59- 021	3NOV68	I 13BH1	A FWD ACTUATOR MLG FAILURE
59-0023	29AUG68	I 45BF1	A SEC. HYD PUMP FAILED
59- 026	21NOV68	I 14JR1	A LOST SPEED BRAKE AND ACTUATORS
59- 027	10FEB67	I 46HA1	A RELIEF VALVE FAILURE
59- 033	13OCT65	I 51E00	A AD1 MATERIAL FAILURE
59- 033	18MAR69	I 14JA1	A SPEED BRAKE SEPARATED FROM ACFT

59- 036	4NOV65	I 45A00	A BRAKE SYSTEM MALFUNCTION
59- 036	12JUN67	I 75GE1	A MB-1 EJECTOR RACK MATERIAL FAILURE
59-0040	8SEP67	I 14FA1	A HYD RUDDER PACKAGE VALVE FAILURE
59- 041	75FEB65	A1 13AAA	A LH MLG STRUT FAILURE,ACFT DESTROYED
59- 042	15OCT65	I 42AG1	A FAULTY WIRING
59- 044	28SEP65	I 13UH1	A BRAKE RELAY FAILURE
59- 044	3NOV65	I 14A00	A MATERIAL FAILURE
59-0044	27MAR68	I 51EA1	A ATTITUDE INDICATOR MALFUNCTION
59-0047	1APR68	I 51EA1	A GYRO FAILURE
59-0052	10LCC66	I 14JR1	A LOST SPEED BRAKES AND DRAG CHUTE
59- 053	1JUN66	I 23HAD	G MALFUNCTION FUEL CONTROL
59- 054	30AUG65	I 14JA1	A LOST SPEED BRAKES AND DRAG CHUTE
59- 056	23FEB67	I 14JR1	A LOST SPEED BRAKES
59- 057	19JUL67	I 14JK1	A LIMIT SWITCH FAILURE
59- 062	16MAR65	I 51EB1	A TURN RATE XMTN MALFUNCTION
59- 065	15MAR65	I 23JHD	A OIL SCAVENGER PUMP FAIL
59-0065	27MAY70	I 14UC1	A HEP VALVE MALFUNCTION
59- 067	14OCT65	I 51E00	A ADI MATERIAL FAILURE
59-0068	13SEP67	A1 46GA1	A FUEL SHUT-OFF VALVE FAILURE,PN132305-1,DESTROYED
59- 074	26JUL68	I 52AE1	A POS,POTENTIOMETER,AILERON,DEFECTIVE
59- 074	5AUG68	I 14FA1	A HYD PACKAGE DEFECTIVE
59- 076	13OCT65	I 51E00	A ADI MATERIAL FAILURE
59- 080	13OCT65	I 51E00	A ADI MATERIAL FAILURE
59- 082	19OCT65	I 51C00	A ADI MATERIAL FAILURE
59- 083	5OCT65	I 51EC1	A DISPLACEMENT GYRO FAILURE
59-0085	10SEP69	I 14AD1	A DAMPER AMPLIFIER DEFECTIVE
59- 089	22DEC67	I 14JA1	A LOST SPEED BRAKES
59- 090	18MAR65	I 45BF1	A SECONDARY HYDRAULIC PUMP
59- 090	30JUN65	I 11H00	A CANOPY SEPARATED FROM ACFT
59- 091	5JUL67	A2 13ACE	A NOSE GEAR PISTON,FAILURE
59- 092	23JUN65	I 23JHD	A MAIN OIL PUMP
59- 096	7JAN70	A2 13000	A LANDING GEAR FAILURE
59- 097	6JUN67	I 75GE1	A MB-1 EJECTOR RACK MATERIAL FAILURE
59- 100	16APR70	A1 13AA1	A LH MLG UPPER CYLINDER MATERIAL FAILURE
59- 101	8FEB68	I 13BE1	A FAILURE MLG ACTUATING CYL
59- 101	7AUG68	I 13BE1	A SELECTOR VALVE MLG INTERNAL FAILURE
59- 102	13DEC66	I 14JF1	A LH SPEED BRAKE CYLINDER FAILURE
59- 104	1UNOV66	A2 45000	A MLG'S FOLDED INBD
59- 109	2JUN67	I 23SR0	A CSD FAILURE
59-0112	18MAR68	I 52AF1	A PITCH-TRIM POTENTIOMETER FAILURE
59-0121	15MAR68	I 13BE1	A SELECTOR VALVE MLG
59- 129	10CT65	I 51EC1	A DISPLACEMENT GYRO FAILURE
59- 133	14OCT66	I 14JB1	A SPEED BRAKE DOOR & ACTUATOR LOST
59-0133	15NOV66	I 44FP1	G NOSE DOOR OPEN SOLENOID
59- 133	29DEC68	I 51EC1	A MALFUNCTION ATTITUDE INDICATOR
59-0133	30OCT69	I 23SR0	A BAFFLE PLATE,OIL COOLER
59- 134	28NOV67	I 14JA1	A LOST RH SPEED BRAKE
59- 143	9SEP65	I 51E00	A ADI FAILURE
59- 157	26JUL67	I 41U00	A T-BOLT MARMAN CLAMPS FAILURE
59- 158	29DEC68	I 51EC1	A MALFUNCTION ATTITUDE INDICATOR
59- 159	9MAR65	I 23DC1	A HEP VALVE MALFUNCTION
59- 160	31JAN67	I 13LJ1	A LH MLG SWICH FAILURE
59-0161	26MAY69	I 13MR1	A MLG SAFETY SWITCH MALFUNCTION
59- 458	2MAY67	I 46HA1	A PRESSURE RELIEF VALVE MALFUNCTION
59-0164	21DEC70	I 97000	MAINTENANCE
59-0783	17DEC70	I 45C00	MATERIAL
59-0458	14DEC70	I 14J00	MAT.
57-2482	04DEC70	I 13000	PILOT
57-2496	03DEC70	I 23000	MAIN
59-0004	25NOV70	I 97000	PERSONNEL
59-0081	17NOV70	I 13000	MAT
59-0038	16NOV70	I 13000	MAIN
57-2509	12NOV70	I 13000	
59-0031	17OCT70	I 13000	
59-0109	08OCT70	I 75000	
59-0123	08OCT70	I 93000	
57-2487	29SEP70	I 13000	
57-2470	25SEP70	I 14000	
59-0060	24SEP70	I 23000	
59-0085	15SEP70	I 13000	
59-0164	04SEP70	I 13AG1	
59-0155	23AUG70	I 13000	
59-0903	13AUG70	I 45000	MAIN
59-0777	03AUG70	I 46000	
59-0776	28JUL70	I 45000	
59-0149	14JUL70	I 46000	
59-0772	01JUL70	I 47000	
59-0085	15JUN70	I 13000	BRAKES
57-2535	08JUN70	I 45000	
59-0774	01JUN70	I 23HAD	FUEL VALVE
59-0016	28MAY70	I 93000	
59-0065	27MAY70	I 14000	HEP VALVE
57-2401	25MAY70	I 93000	
57-2529	22MAY70	I 93000	
59-0902	21MAY70	I 75000	MAT.
59-0059	01MAY70	I 46000	MAIN,
59-0782	30APR70	I 13000	DRAG CHUTE

57-2967	23APR70	1	14000	
57-0232	22APR70	1	11000	
59-0026	18APR70	1	52000	PILOT
59-0145	17APR70	1	75000	MAIN
57-2494	16APR70	1	93000	MAIN
59-0241	13APR70	1	14000	SPEED BRAKES
59-0129	09APR70	1	75000	MAIN
59-0090	27MAR70	1	13000	MAT
58-0453	21MAR70	1	93000	
60-0453	20MAR70	1	93000	
57-0237	17MAR70	1	46000	PILOT
59-0028	04MAR70	1	13000	MAT
57-2466	02MAR70	1	13000	MAT
59-0024	26FEB70	1	93000	
57-2539	25FEB70	1	13000	MAIN
57-2467	16FEB70	1	13000	MAT
56-0453	09FEB70	1	93000	DRAG CHUTE
59-0058	05FEB70	1	13000	OPERATOR
59-0131	01FEB70	1	11000	CANOPY
59-0161	28JAN70	1	75000	MAT
57-2466	27JAN70	1	75000	MAT
59-0063	23JAN70	1	46000	PER.
57-2521	21JAN70	1	93000	DRAG CHUTE
59-0103	21JAN70	1	14000	
59-0037	19JAN70	1	13000	PER.
57-2538	11JAN70	1	93000	MAT
57-0465	09JAN70	1	93000	DRAG CHUTE
59-0018	21DEC71	1	93000	
59-0149	16DEC71	1	13000	
59-0132	15DEC71	1	13AHJ	
59-0003	05DEC71	1	93AF1	
59-0003	26NOV71	1	93000	DRAG CHUTE
59-0159	13NOV71	1	14J00	SPEED BRAKES
56-0509	10NOV71	1	43000	DRAG CHUTE
59-0463	07NOV71	1	11FDA	MAT
59-0016	04NOV71	1	13000	MAIN
59-0062	08NOV71	1	52FA1	CPU111/2V
58-0785	26OCT71	1	23000	FLAMEOUT
57-2506	26OCT71	1	46000	MAT
58-0781	14OCT71	1	13000	MLG SELECTOR VALVE
59-0096	04OCT71	1	93000	MAIN
59-0046	04OCT71	1	97000	MAIN
59-0091	21SEP71	1	97000	PILOT
57-2524	15SEP71	1	756F1	MAT
59-0060	07SEP71	1	40000	
59-0005	31AUG71	1	11000	PILOT
57-0465	03SEP71	1	97000	MAIN
59-0158	26AUG71	1	13000	DRAG CHUTE
59-0019	30AUG71	1	13000	
59-0006	18AUG71	1	23000	MAT
56-0459	16AUG71	1	93000	PILOT
58-0778	30JUL71	1	12000	PILOT
58-0778	30JUL71	1	12000	PILOT
57-0460	25JUL71	1	13AJ1	
59-0160	04JUL71	1	97000	SUPERVISORY
57-2505	08JUL71	1	14FA1	MAT
59-0059	06JUL71	1	13000	MAT
56-0458	06JUL71	1	23HAD	MAIN
59-0015	14JUN71	1	11000	MAIN
57-2523	11JUN71	1	23000	MAIN
59-0091	10JUN71	1	13000	MAT
59-0141	26MAY71	1	13000	MAT
58-0778	19MAY71	1	93000	MAIN
57-2533	18MAY71	1	23EB0	MAT
57-0018	17MAY71	1	13AE1	MAT
59-0071	17MAY71	1	46000	MAT
57-2473	13MAY71	1	97000	MAIN
59-0165	30APR71	1	23EB0	MAT
57-2543	29APR71	1	74K01	MAT
57-2536	26APR71	1	46000	MAT
59-0143	15APR71	1	46000	MAIN
57-2466	15APR71	1	11FCC	MAIN
59-0112	09APR71	1	93000	MAIN
57-2463	24MAR71	1	13000	MAIN
59-0034	11MAR71	1	93AP1	MAIN
59-0063	09MAR71	1	11000	PILOT
57-2519	08MAR71	1	52000	MAT
59-0032	01MAR71	1	13000	
58-0767	24FEB71	1	75000	
59-0027	22FEB71	1	46000	MAIN
56-0465	22FEB71	1	23000	MAIN
59-0044	03FEB71	1	97000	PERSONNEL
59-0129	02FEB71	1	23000	MAIN
58-0785	15JAN71	1	14JR1	MAT
59-0034	08JAN71	1	47AK1	PERSONNEL
59-0765	16JAN71	1	23000	AFTER NUMBER PROBLEM

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54-0902 05AUG70 A1 13001 RH MLG DOOR SHUTTLE VALVE
54-0116 28MAY70 A1 46HDD WING TANK RELEASE SWITCH
54-0100 16APR70 A1 13A00 LMG UPPER CYLINDER
54-0096 07JAN70 A2 13000 MLG
54-0163 30SEP71 A1 23AA0 P/N 318616
57-2544 29MAR71 A1 14JAI RH SPEED BRAKE
*END
/* PLACF TFG DATA BEFORE THIS CARD
//TPR,TU14 DU DISP>[OLD,PASS] D1C-PASS
//TPR,TU22 DU DISP>[OLD,PASS] D22-PASS
//TPR,TPRIN DU *.SPACE>[TRK,[1,1]]
T/P DT01 10200002080
T/P TU14 10200002080
T/P TU22 10200002050
/* PLACF T/P CONTROL CARDS BEFORE THIS CARD
//C98975 EXEC P9642N,TIME>01,ACCT>D35323007
//CHG, SORTIN DD USN>P.9895453,DISP>[OLD,PASS], CD22/23 1
// DCB>[LRECL>0050,RLKSIZE>3000],LABEL>[NSL,RETPD>099]
//CHG, SORTOUT DD DISP>[KEEP],UNIT>[T+F1,1,DEFER],DSN>A.9895455, CT12 1
// VOL>SER>[+F1,A+F1,B+F1,C+F1,D+F1,E+F1,F+F1,G+F1,H+F1, CT12 2
// I+F1,J+F1,K+F1,L+F1,M+F1,N+F1,O+F1,P+F1,Q+F1,R+F1,S+F1],CT12 3
// DCB>[LRECL>0050,RLKSIZE>3000]
//CHG, SYSIN DD *.DCB>BLKSIZE>0080,SPACE>[TRK,[1,1]]
SORT FIELDS>[025,008,CH,A,045,004,CH,A,010,005,CH,A],SIZE>E0002000
MODS E15>[E.5,008,SortL1B,N],E18>[F18,024,SortL1B,N]
/*
//C9897P EXEC C9603N,TIME>01,ACCT>D35323007
//CHG,TU12 DD DISP>[KEEP],UNIT>[T+F1,1,DEFER],DSN>A.9895455, CT12 1
// VOL>SER>[+F1,A+F1,B+F1,C+F1,D+F1,E+F1,F+F1,G+F1,H+F1, CT12 2
// I+F1,J+F1,K+F1,L+F1,M+F1,N+F1,O+F1,P+F1,Q+F1,R+F1,S+F1],T12 3
//CHG,TPRIN DD *.SPACE>[TRK,[1,1]]
T/P TU12 10200002050
/* PLACF T/P CONTROL CARDS BEFORE THIS CARD

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### 6.3.2 AIE SCREEN

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//I989/P JOB 01: G. WANG :PRTY>02,TPRIN>HOLD
//C98970 EXEC P9605L,TIME>01,ACCT>D35323007
//CHG,TU14 DD DISP>[PASS],UNIT>[T+F3,1,DEFER],DSN>C.9897413, CT14 1
// VOL>SER>[+F3,A+F3,B+F3,C+F3,D+F3,E+F3,F+F3,G+F3,H+F3, CT14 2
// I+F3,J+F3,K+F3,L+F3,M+F3,N+F3,O+F3,P+F3,Q+F3,R+F3,S+F3],T14 3
//CHG,TU22 DD USN>P.9895953,SPACE>[CYL,[022,002]] D22-OUT
//CHG,INPUT DD *.SPACE>[CYL,[1,1]] 1440 CDS
00000 COMPILE COMPILE G. WANG, C98970
01040 DATE-WRITTEN. 14 JAN 72. C98970
01050 REMARKS. C98970
01060 SCREENS AIE DATA TAPE. C98970
02000 ENVIRONMENT DIVISION. C98970
02010 CONFIGURATION SECTION. C98970
02020 SOURCE-COMPUTER. IBM-360. C98970
02030 OBJECT-COMPUTER. IBM-360. C98970
02100 INPUT-OUTPUT SECTION. C98970
02110 FILE-CONTROL. C98970
02120 SELECT INFILE ASSIGN TO UT-S-TU14 C98970
02130 RESERVE 1 ALTERNATE AREA. C98970
02140 SELECT OUTFILE ASSIGN TO UT-S-TU22 C98970
02150 RESERVE 1 ALTERNATE AREA. C98970
02160 SELECT SCREEN-FILE ASSIGN TO DA-S-DT01 C98970
02170 RESERVE 1 ALTERNATE AREA. C98970
10000 DATA DIVISION. C98970
10010 FILE SECTION. C98970
10100 FD INFILE C98970
10110 C98970
10120 RECORDING MODE IS F C98970
10130 BLOCK CONTAINS 60 RECORDS C98970
10140 RECORD CONTAINS 50 CHARACTERS C98970
10150 LABEL RECORDS ARE OMITTED C98970
10160 DATA RECORDS ARE INREC. C98970
10170 01 INREC SYNC. C98970
10180 02 DATA. C98970
10190 03 DATAB PICTURE X(4). C98970
10200 03 TIPL PICTURE X(4). C98970
10210 03 DATAC PICTURE X(9). C98970
10220 02 DATE-IN. C98970
10230 03 YEAR PICTURE 9. C98970
10240 03 MONTH PICTURE 99. C98970
10250 03 DAY-IN PICTURE 99. C98970
10252 02 DATEGRP REDEFINES DATE-IN PICTURE X(8). C98970
10260 02 DATAD. C98970
10270 03 DATAE PICTURE XX. C98970
10280 03 S-N PICTURE X(8). C98970
10290 03 DATAF PICTURE X(12). C98970
10300 02 FILLER PICTURE X(4). C98970
10310 02 DATAG PICTURE XX. C98970

```



11100	FD	OUTFILE				C98970
11110						C98970
11120		RECORDING MODE IS F				C98970
11130		BLOCK CONTAINS 60 RECORDS				C98970
11140		RECORD CONTAINS 50	CHARACTERS			C98970
11150		LABEL RECORDS ARE OMITTED				C98970
11160		DATA RECORDS ARE OUTREC.				C98970
11170	01	OUTREC SYNC.				C98970
11180	02	DATA1	PICTURE X(17).			C98970
11190	02	DATA2-OUT	PICTURE 9(5).			C98970
11200	02	DATA2	PICTURE X(22).			C98970
11210	02	DATA3	PICTURE 9(4).			C98970
11220	02	DATA3	PICTURE XX.			C98970
12000	FD	SCREEN-FILE				C98970
12010		RECORDING MODE IS F				C98970
12020		BLOCK CONTAINS 20 RECORDS				C98970
12030		RECORD CONTAINS 80	CHARACTERS			C98970
12040		LABEL RECORDS ARE STANDARD				C98970
12050		DATA RECORDS ARE SCREEN-REC.				C98970
12060	01	SCREEN-REC SYNC.				C98970
12070	02	SCREEN-DATA	PICTURE X(80).			C98970
12080	02	FILLER REDEFINES SCREEN-DATA.				C98970
12090	03	DATA-1	PICTURE X(4).			C98970
12100	03	FILLER	PICTURE X(76).			C98970
12110	02	FILLER REDEFINES SCREEN-DATA.				C98970
12120	03	DATA-2	PICTURE 99.			C98970
12130	03	FILLER	PICTURE X(78).			C98970
12140	02	FILLER REDEFINES SCREEN-DATA.				C98970
12150	03	DATA-3	PICTURE X(8).			C98970
12160	03	FILLER	PICTURE X(72).			C98970
30000		WORKING-STORAGE SECTION.				C98970
30010	01	NINE SYNC.				C98970
30020	02	FILLER	PICTURE X(17) VALUE			C98970
30030			:9999999999999999991.			C98970
30040	02	FILLER	PICTURE 9(5) VALUE 99999.			C98970
30050	02	FILLER	PICTURE X(22) VALUE			C98970
30060			:999999999999999999991.			C98970
30070	02	FILLER	PICTURE 9(4) VALUE 9999.			C98970
30080	02	FILLER	PICTURE XX VALUE :991.			C98970
30400	01	DAYS-IN-YEAR SYNC.				C98970
30410	02	FILLER	PICTURE 999 VALUE 0.			C98970
30420	02	FILLER	PICTURE 999 VALUE 31.			C98970
30430	02	FILLER	PICTURE 999 VALUE 59.			C98970
30440	02	FILLER	PICTURE 999 VALUE 90.			C98970
30450	02	FILLER	PICTURE 999 VALUE 120.			C98970
30460	02	FILLER	PICTURE 999 VALUE 151.			C98970
30470	02	FILLER	PICTURE 999 VALUE 181.			C98970
30480	02	FILLER	PICTURE 999 VALUE 212.			C98970
30490	02	FILLER	PICTURE 999 VALUE 243.			C98970
30500	02	FILLER	PICTURE 999 VALUE 273.			C98970
30510	02	FILLER	PICTURE 999 VALUE 304.			C98970
30520	02	FILLER	PICTURE 999 VALUE 334.			C98970
30530	01	NO-DAYS-IN-YEAR; REDEFINES DAYS-IN-YEAR SYNC.				C98970
30540	02	NO-DAYS OCCURS 12 TIMES				C98970
30550		PICTURE 999.				C98970
30600	01	DAYS-IN-YEARS SYNC.				C98970
30610	02	FILLER	PICTURE 9(4) VALUE 0.			C98970
30620	02	FILLER	PICTURE 9(4) VALUE 365.			C98970
30630	02	FILLER	PICTURE 9(4) VALUE 730.			C98970
30640	02	FILLER	PICTURE 9(4) VALUE 1095.			C98970
30650	02	FILLER	PICTURE 9(4) VALUE 1461.			C98970
30660	02	FILLER	PICTURE 9(4) VALUE 1826.			C98970
30670	02	FILLER	PICTURE 9(4) VALUE 2191.			C98970
30680	02	FILLER	PICTURE 9(4) VALUE 2556.			C98970
30690	01	DAY-IN-YEAR-TABLE REDEFINES DAYS-IN-YEARS SYNC.				C98970
30700	02	DAY-YEAR OCCURS 8 TIMES				C98970
30710		PICTURE 9(4).				C98970
30900	01	KOUNT	PICTURE S999 COMPUTATIONAL VALUE ZERO SYNC.			C98970
30910	01	KNT	PICTURE S999 COMPUTATIONAL VALUE ZERO SYNC.			C98970
30920	01	LOW-S-II	PICTURE X(8).			C98970
30930	01	HIGH-S-II	PICTURE X(8).			C98970
30940	01	LEAP-YEAR-68	PICTURE 9 SYNC VALUE 4.			C98970
30950	01	LEAP-YEAR-72	PICTURE 9 SYNC VALUE 8.			C98970
30960	01	TYPE-A-L	PICTURE X(4).			C98970
30970	01	RECURS-READ	PICTURE 9(6) SYNC VALUE ZERO.			C98970
30980	01	RECURS-PASS	PICTURE 9(6) SYNC VALUE ZERO.			C98970
30990	01	NO-IEJ-A-C	PICTURE 99.			C98970
31140	01	REJ-S-N SYNC.				C98970
31150	02	R-S-N OCCURS 25 TIMES DEPENDING ON NO-REJ-A-C.				C98970
31160		PICTURE X(8).				C98970
50000		PROCEDURE DIVISION.				C98970
50010		OPEN-FILES.				C98970
50020		OPEN INPUT INFILE, SCREEN-FILE, OUTPUT OUTFILE.				C98970
50030		PERFORM SCREEN-IN THRU END-SC-IN.				C98970
50100		READ-INPUT.				C98970
50110		READ INFILE				C98970

```

50120      AT END GO TO BLOCK-CHECK.                                C98970
50130      ADD 1 TO RECORDS-READ.                                    C98970
50140      IF TYPE IS NOT EQUAL TO TYPE-A-C THEN GO TO READ-INPUT. C98970
50150      IF DAY-IN IS LESS THAN 1 THEN GO TO READ-INPUT.          C98970
50160      IF S-N IS LESS THAN LOW-S-N THEN GO TO READ-INPUT.      C98970
50170      IF J-N IS GREATER THAN HIGH-S-N THEN GO TO READ-INPUT.  C98970
50190      MOV= ZERO TO KOUNT.                                       C98970
50200      LOOP1.                                                     C98970
50210          ADD 1 TO KOUNT.                                       C98970
50220          IF J-N IS EQUAL TO R-S-N [KOUNT] GO TO READ-INPUT.   C98970
50230          IF KOUNT IS LESS THAN NO-REJ-A-C GO TO LOOP1.       C98970
50300      CAL-DATE.                                                C98970
50310          COMPUTE KOUNT > YEAR - 4.                            C98970
50320          IF KOUNT IS LESS THAN 1 THEN ADD 10 TO KOUNT.       C98970
50330          MOVE MONTH TO KNT.                                    C98970
50340          COMPUTE JDAY > DAY-IN < KDAY [KNT] < DAY-YEAR [KOUNT]. C98970
50350          IF JOUNT EQUAL TO LEAP-YEAR-68 THEN GO TO LEAP-YEAR. C98970
50360          IF KOUNT EQUAL TO LEAP-YEAR-72 THEN GO TO LEAP-YEAR. C98970
50370          GO TO WRITE-OUTPUT.                                    C98970
50400      LEAP-YEAR.                                              C98970
50410          IF MONTH IS GREATER THAN 2 THEN ADD 1 TO JDAY.     C98970
50500      WRITE-OUTPUT.                                           C98970
50510          MOVE DATAA TO DATA1.                               C98970
50520          MOVE DATEGRP TO DATE-OUT.                           C98970
50530          MOVE DATAD TO DATA2.                                C98970
50540          MOVE DATAG TO DATA3.                                C98970
50550          WRITE OUTREC.                                         C98970
50560          ADD 1 TO RECORDS-PASS.                                C98970
50570          GO TO READ-INPUT.                                     C98970
50600      BLOCK-CHECK.                                           C98970
50610          COMPUTE KOUNT > RECORDS-PASS - [(RECORDS-PASS / 60) * 60]. C98970
50620          IF KOUNT IS EQUAL TO ZERO GO TO CLOSE-FILES.        C98970
50630      LOOP2.                                                  C98970
50640          WRITE OUTREC FROM NINE.                               C98970
50650          ADD 1 TO KOUNT.                                       C98970
50660          IF KOUNT IS LESS THAN 60 GO TO LOOP2.               C98970
50700      CLOSE-FILES.                                           C98970
50710          CLOSE INFILE WITH LOCK.                              C98970
50720          CLOSE OUTFILE WITH LOCK.                             C98970
50740          DISPLAY : NUMBER OF RECS-READ : RECORDS-READ UPON CONSOLE. C98970
50750          DISPLAY : NUMBER OF RECS-PASS : RECORDS-PASS UPON CONSOLE. C98970
50760          DISPLAY : EQU 9897 : UPON CONSOLE.                  C98970
50770          GOBACK.                                              C98970
50800      SCREEN-IN.                                             C98970
50810          REAL SCREEN-FILE AT END GO TO CLOSE-FILES.         C98970
50820          MOVE DATA-1 TO TYPE-A-C.                            C98970
50830          READ SCREEN-FILE AT END GO TO CLOSE-FILES.          C98970
50840          MOVE DATA-2 TO NO-REJ-A-C.                          C98970
50900          MOVE ZERO TO KOUNT.                                  C98970
50910      S-I-1.                                                 C98970
50920          ADD 1 TO KOUNT.                                       C98970
50930          READ SCREEN-FILE AT END GO TO CLOSE-FILES.          C98970
50940          MOVE DATA-3 TO H-S-N [KOUNT].                       C98970
50950          IF KOUNT IS LESS THAN NO-REJ-A-C GO TO S-I-1.       C98970
50960          READ SCREEN-FILE AT END GO TO CLOSE-FILES.          C98970
50970          MOVE DATA-3 TO LOW-S-N.                              C98970
50980          READ SCREEN-FILE AT END GO TO CLOSE-FILES.          C98970
50990          MOVE DATA-3 TO HIGH-S-N.                            C98970
51000      END-SC-IN. EXIT.                                       C98970
/*      PLACE CONUL SOURCE BEFORE THIS CARD
//CHG,TFGIN DD *,SPACE>[CYL,(1,1)]
TFG DT01 11 0202080
F106 A-C TYPE
13 NO REJ A/C
1440 CDS

57000234
57000239
57000240
57001523
57002507
57002513
57002516
57 02519
57002523
57002529
58000795
59000061
59000150
57000001
59999999
*END
/*      PLACE TFG DATA BEFORE THIS CARD
//TPR,TU14 DD DISP>[OLD,KEEP],VOL>SER>+F3,UNIT>T+F3
//TPR,TU22 DD DISP>[OLD,PASS]
//TPR,TPRIN DD *,SPACE>[TRK,(1,1)]
T/P DT01 16100802080
T/P TU14 10500502050
T/P TU22 10200502050
/*      PLACE T/P CONTROL CARDS BEFORE THIS CARD

```

### 6.3.3 AIE SORT

```
//C9897R EXEC P9622N,TIME>01,ACCT>D35323007
//CHG.SORTIN DU DSN>+P.9895953,DISP>[OLD,DELETE], C022/23 1
// CH>[LRECL>0050,HLKSIZE>3000],LABEL>[NSL,RETPD>000]
//CHG.SORTOUT DU DISP>[KEEP],UNIT>[T+F1,1,DEFER],DSN>+A.9895455, CT12 1
// VOL>SER>[+F1,A+F1,B+F1,C+F1,D+F1,E+F1,F+F1,G+F1,H+F1, CT12 2
// I+F1,J+F1,K+F1,L+F1,M+F1,N+F1,O+F1,P+F1,Q+F1,R+F1,S+F1],CT12 3
// DCH>[LRECL>0050,HLKSIZE>3000]
//CHG.SYSIN DU *,DCH>HLKSIZE>0080,SPACE>[TRK,[1,1]]
SORT FIELDS>[025,00A,CH,A,045,004,CH,A,010,005,CH,A,001,050,CH,A], C
SIZE>E0010000
MODS E15>[E15,008,SORTLIB,N],E18>[E18,024,SORTLIB,N]
/*
//C9897Y EXEC C9603N,TIME>01,ACCT>D35323007
//CHG.TU12 DU DISP>[KEEP],UNIT>[T+F1,1,DEFER],DSN>+A.9895455, CT12 1
// VOL>SER>[+F1,A+F1,B+F1,C+F1,D+F1,E+F1,F+F1,G+F1,H+F1, CT12 2
// I+F1,J+F1,K+F1,L+F1,M+F1,N+F1,O+F1,P+F1,Q+F1,R+F1,S+F1] T12 3
//CHG.TPR1N DU *,SPACE>[TRK,[1,1]]
//CHG.TU12 10000502050
// PLACE 1/P CONTROL CARDS BEFORE THIS CARD
```

### 6.3.4 AIE MERGE

```
//T9897M JOB (1: G. WANG : ,PRTY>02, TYPRUN>HOLD
//C9897N EXEC P9623N,TIME>02,ACCT>D35323007
//CHG.SORTIN01 DU DISP>[KEEP],UNIT>[T+F5,1,DEFER],DSN>+E.9895455, CT22 1
// VOL>SER>[+F5,A+F5,B+F5,C+F5,D+F5,E+F5,F+F5,G+F5,H+F5, CT22 2
// I+F5,J+F5,K+F5,L+F5,M+F5,N+F5,O+F5,P+F5,Q+F5,R+F5,S+F5],CT22 3
// DCH>[LRECL>0050,HLKSIZE>3000],LABEL>[NSL,RETPD>099]
//CHG.SORTIN02 DU DISP>[KEEP],UNIT>[T+F6,1,DEFER],DSN>+F.9895455, CT23 1
// VOL>SER>[+F6,A+F6,B+F6,C+F6,D+F6,E+F6,F+F6,G+F6,H+F6, CT23 2
// I+F6,J+F6,K+F6,L+F6,M+F6,N+F6,O+F6,P+F6,Q+F6,R+F6,S+F6],CT23 3
// DCH>[LRECL>0050,HLKSIZE>3000],LABEL>[NSL,RETPD>099]
//CHG.SORTIN03 DU DISP>[KEEP],UNIT>[T+F7,1,DEFER],DSN>+G.9895455, CT24 1
// VOL>SER>[+F7,A+F7,B+F7,C+F7,D+F7,E+F7,F+F7,G+F7,H+F7, CT24 2
// I+F7,J+F7,K+F7,L+F7,M+F7,N+F7,O+F7,P+F7,Q+F7,R+F7,S+F7],CT24 3
// DCH>[LRECL>0050,HLKSIZE>3000],LABEL>[NSL,RETPD>099]
//CHG.SORTIN04 DU DISP>[KEEP],UNIT>[T+F8,1,DEFER],DSN>+H.9895455, CT25 1
// VOL>SER>[+F8,A+F8,B+F8,C+F8,D+F8,E+F8,F+F8,G+F8,H+F8, CT25 2
// I+F8,J+F8,K+F8,L+F8,M+F8,N+F8,O+F8,P+F8,Q+F8,R+F8,S+F8],CT25 3
// DCH>[LRECL>0050,HLKSIZE>3000],LABEL>[NSL,RETPD>099]
//CHG.SORTIN05 DU DISP>[KEEP],UNIT>[T+F2,1,DEFER],DSN>+B.9895455, CT13 1
// VOL>SER>[+F2,A+F2,B+F2,C+F2,D+F2,E+F2,F+F2,G+F2,H+F2, CT13 2
// I+F2,J+F2,K+F2,L+F2,M+F2,N+F2,O+F2,P+F2,Q+F2,R+F2,S+F2],CT13 3
// DCH>[LRECL>0050,HLKSIZE>3000],LABEL>[NSL,RETPD>099]
//CHG.SORTIN06 DU DISP>[KEEP],UNIT>[T+F3,1,DEFER],DSN>+C.9895455, CT14 1
// VOL>SER>[+F3,A+F3,B+F3,C+F3,D+F3,E+F3,F+F3,G+F3,H+F3, CT14 2
// I+F3,J+F3,K+F3,L+F3,M+F3,N+F3,O+F3,P+F3,Q+F3,R+F3,S+F3],CT14 3
// DCH>[LRECL>0050,HLKSIZE>3000],LABEL>[NSL,RETPD>099]
//CHG.SORTOUT DU DISP>[KEEP],UNIT>[T+F1,1,DEFER],DSN>+A.9895455, CT12 1
// VOL>SER>[+F1,A+F1,B+F1,C+F1,D+F1,E+F1,F+F1,G+F1,H+F1, CT12 2
// I+F1,J+F1,K+F1,L+F1,M+F1,N+F1,O+F1,P+F1,Q+F1,R+F1,S+F1],CT12 3
// DCH>[LRECL>0050,HLKSIZE>3000]
//CHG.SYSIN C) *,DCH>HLKSIZE>0080,SPACE>[TRK,[1,1]]
MERGE FIELDS>[025,00A,CH,A,045,004,CH,A,010,005,CH,A]
/*
//C9897P EXEC C9603N,TIME>01,ACCT>D35323007
//CHG.TU12 DU DISP>[KEEP],UNIT>[T+F1,1,DEFER],DSN>+A.9895455, CT12 1
// VOL>SER>[+F1,A+F1,B+F1,C: 1,D+F1,E+F1,F+F1,G+F1,H+F1, CT12 2
// I+F1,J+F1,K+F1,L+F1,M+F1,N+F1,O+F1,P+F1,Q+F1,R+F1,S+F1] T12 3
//CHG.TU13 DU DISP>[KEEP],UNIT>[T+F2,1,DEFER],DSN>+H.9895455, CT13 1
// VOL>SER>[+F2,A+F2,B+F2,C+F2,D+F2,E+F2,F+F2,G+F2,H+F2, CT13 2
// I+F2,J+F2,K+F2,L+F2,M+F2,N+F2,O+F2,P+F2,Q+F2,R+F2,S+F2] T13 3
//CHG.TU14 DU DISP>[KEEP],UNIT>[T+F3,1,DEFER],DSN>+C.9895455, CT14 1
// VOL>SER>[+F3,A+F3,B+F3,C+F3,D+F3,E+F3,F+F3,G+F3,H+F3, CT14 2
// I+F3,J+F3,K+F3,L+F3,M+F3,N+F3,O+F3,P+F3,Q+F3,R+F3,S+F3] T14 3
//CHG.TU22 DU DISP>[KEEP],UNIT>[T+F5,1,DEFER],DSN>+E.9895455, CT22 1
// VOL>SER>[+F5,A+F5,B+F5,C+F5,D+F5,E+F5,F+F5,G+F5,H+F5, CT22 2
// I+F5,J+F5,K+F5,L+F5,M+F5,N+F5,O+F5,P+F5,Q+F5,R+F5,S+F5] T22 3
//CHG.TU23 DU DISP>[KEEP],UNIT>[T+F6,1,DEFER],DSN>+F.9895455, CT23 1
// VOL>SER>[+F6,A+F6,B+F6,C+F6,D+F6,E+F6,F+F6,G+F6,H+F6, CT23 2
// I+F6,J+F6,K+F6,L+F6,M+F6,N+F6,O+F6,P+F6,Q+F6,R+F6,S+F6] T23 3
//CHG.TU24 DU DISP>[KEEP],UNIT>[T+F7,1,DEFER],DSN>+G.9895455, CT24 1
// VOL>SER>[+F7,A+F7,B+F7,C+F7,D+F7,E+F7,F+F7,G+F7,H+F7, CT24 2
// I+F7,J+F7,K+F7,L+F7,M+F7,N+F7,O+F7,P+F7,Q+F7,R+F7,S+F7] T24 3
//CHG.TU25 DU DISP>[KEEP],UNIT>[T+F8,1,DEFER],DSN>+H.9895455, CT25 1
// VOL>SER>[+F8,A+F8,B+F8,C+F8,D+F8,E+F8,F+F8,G+F8,H+F8, CT25 2
// I+F8,J+F8,K+F8,L+F8,M+F8,N+F8,O+F8,P+F8,Q+F8,R+F8,S+F8] T25 3
```



```

50130      MOVE INREC TO TEMPREC.                                C98970
50140      READ INFILE                                           C98970
50150              AT END GO TO WRITE-LAST.                       C98970
50160      GO TO COMPARE.                                         C98970
50170      COUNT-DUPS.                                           C98970
50175      IF INREC IS EQUAL TO NINES GO TO BLOCK-CHECK.       C98970
50180      ADD 1 TO NUMBER-DUPS.                                  C98970
50190      READ INFILE                                           C98970
50200              AT END GO TO WRITE-LAST.                       C98970
50210      GO TO COMPARE.                                         C98970
50220      WRITE-LAST.                                           C98970
50230      WRITE OUTREC FROM TEMPREC.                             C98970
50235      ADD 1 TO RECORDS-PASS.                                 C98970
50240      CLOSE-FILES.                                           C98970
50250      CLOSE INFILE WITH LOCK.                               C98970
50260      CLOSE OUTFILE WITH LOCK.                              C98970
50270      DISPLAY :NO, DUPS : NUMBER-DUPS UPON CONSOLE.       C98970
50280      DISPLAY :EOJ 9897 : UPON CONSOLE.                   C98970
50290      GORACK.                                               C98970
50300      BLOCK-CHECK.                                          C98970
50310      COMPUTE KNT = RECORDS-PASS - RECORDS-PASS / 60 * 60. C98970
50320      IF KNT IS EQUAL TO ZERO GO TO CLOSE-FILES.          C98970
50330      NINE-FILL.                                           C98970
50340      WRITE OUTREC FROM NINES.                              C98970
50350      ADD 1 TO KNT.                                          C98970
50360      IF KNT IS LESS THAN 60 GO TO NINE-FILL.             C98970
50370      GO TO CLOSE-FILES.                                    C98970
/*      PLACE CONUL SOURCE BEFORE THIS CARD
//CHG,TFGIN  DU  **,SPACE>[CYL:[1,1]]                        1440 CDS
/*      PLACE TF3 DATA BEFORE THIS CARD
//IPR,TU14  DU  DISP>[OLD,KEEP],VOL>SER>+F3,UNIT>T+P3      T14
//IPR,TPRIN  DU  **,SPACE>[TRK:[1,1]]
T/P TU14      10403902090
/*      PLACE T/P CONTROL CARDS BEFORE THIS CARD

```

### 6.3.6 AIE COPY ACCEPTABLE AIRCRAFT



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 59000110  
 59000115  
 59000116  
 59000119  
 59000126  
 59000127  
 59000128  
 59000130  
 59000132  
 59000133  
 59000137  
 59000138  
 59000140  
 59000141  
 59000143  
 59000144  
 59000145  
 59000146  
 59000147  
 59000149  
 59000151  
 59000152  
 59000153  
 59000155  
 59000157  
 59000164

```

/*          PLACE TFG DATA BEFORE THIS CARD
//TPR.TU12  DU  DISP>[OLD,KEEP],VOL>SER>+F1,UNIT>T+F1
//TPR.TU22  DU  DISP>[OLD,KEEP],VOL>SER>+F5,UNIT>T+F5
//TPR.TPR1N DU  *,SPACE>[THK,[1,1]]
  
```

T12  
 T22

```

T/P DT01 102008^2080
T/P TU22 10500502050
/*          PLACE T/P CONTROL CARDS BEFORE THIS CARD
  
```



## 6.4 IRAN FILE GENERATION PROGRAMS

### 6.4.1 IRAN FORMATTER OF ACCEPTANCE DATA

```

//T9897X JOB 01: G. WANG, 1, PRTY>02, TYPRUN>HOLD
//C9897X EXEC P9655L, TIME>02, ACCT>035323007
//CHG, INPUT 00 *SPACE>CYL, (1,1)
00000 COMBINE COMPILE 6. WANG.
01040 DATE-WRITTEN, 31 JAN 72.
01050 REMARKS, PROGRAM NAME- IRAN ACCEPTANCE DATE DATA PREPROCESSOR.
01060 INPUT -IRAN ACCEPTANCE DATE DATA CARDS.
01070 OUTPUT-IRAN ACCEPTANCE DATE DATA TAPE[8-DIG.SER.<JDATE>],
02000 ENVIRONMENT DIVISION.
02010 CONFIGURATION SECTION.
02020 SOURCE-COMPUTER, IBM-360.
02030 OBJECT-COMPUTER, IBM-360.
02100 INPUT-OUTPUT SECTION.
02110 FILE-CONTROL.
02120 SELECT INCAHDA ASSIGN TO UT-S-TU12
02130 RESERVE 1 ALTERNATE AREA.
02140 SELECT FILEACCP ASSIGN TO UT-S-TU13
02150 RESERVE 1 ALTERNATE AREA.
10000 DATA DIVISION.
10010 FILE SECTION.
10100 FD INCAHDA
10120 RECORDING MODE IS F
10130 BLOCK CONTAINS 01 RECORDS
10140 RECORD CONTAINS 80 CHARACTERS
10150 LABEL RECORDS ARE OMITTED
10160 DATA RECORDS ARE INCAHDA-IRAN.
10200 01 INCAHDA-IRAN SYNC.
10210 02 SEQ-1-2 PICTURE 99.
10220 02 SEQ-3-6 PICTURE 9999.
10230 02 FILLER PICTURE X(10).
10240 02 MU PICTURE 99.
10250 02 CA PICTURE 99.
10260 02 YK PICTURE 99.
10270 02 FILLER PICTURE X(50).
11000 FU FILEACCP
11020 RECORDING MODE IS F
11030 BLOCK CONTAINS 01 RECORDS
11040 RECORD CONTAINS 80 CHARACTERS
11050 LABEL RECORDS ARE OMITTED
11060 DATA RECORDS ARE FILEACCP-IRAN.
11200 01 FILEACCP-IRAN SYNC.
11210 02 FILLER PICTURE X(80).
30000 WORKING-STORAGE SECTION.
30020 01 JYR PICTURE 599 COMPUTATIONAL VALUE ZERO SYNC.
30030 01 IYR PICTURE 599 COMPUTATIONAL VALUE ZERO SYNC.
30040 01 IMO PICTURE 599 COMPUTATIONAL VALUE ZERO SYNC.
30050 01 IOA PICTURE 599 COMPUTATIONAL VALUE ZERO SYNC.
30060 01 JOAY PICTURE 5999 COMPUTATIONAL VALUE ZERO SYNC.
30100 01 RECORDS-HEAD PICTURE 9(6) SYNC VALUE ZERO.
30110 01 RECORDS-PASS PICTURE 9(6) SYNC VALUE ZERO.
31000 01 DAYS-IN-YEAR SYNC.
31010 02 FILLER PICTURE 999 VALUE 0.
31020 02 FILLER PICTURE 999 VALUE 31.
31030 02 FILLER PICTURE 999 VALUE 59.
31040 02 FILLER PICTURE 999 VALUE 90.
31050 02 FILLER PICTURE 999 VALUE 120.
31060 02 FILLER PICTURE 999 VALUE 151.
31070 02 FILLER PICTURE 999 VALUE 181.
31080 02 FILLER PICTURE 999 VALUE 212.
31090 02 FILLER PICTURE 999 VALUE 243.
31100 02 FILLER PICTURE 999 VALUE 273.
31110 02 FILLER PICTURE 999 VALUE 304.
31120 02 FILLER PICTURE 999 VALUE 334.
31130 01 NO-DAYS-IN-YEAR REDEFINES DAYS-IN-YEAR SYNC.
31140 02 KUAYS OCCURS 12 TIMES
31150 PICTURE 999.
32000 01 DAYS-IN-YEARS SYN.
32010 02 FILLER PICTURE 9999 VALUE 0.
32020 02 FILLER PICTURE 9999 VALUE 365.
32030 02 FILLER PICTURE 9999 VALUE 730.
32040 02 FILLER PICTURE 9999 VALUE 1095.
32050 02 FILLER PICTURE 9999 VALUE 1461.
32060 02 FILLER PICTURE 9999 VALUE 1826.
32070 02 FILLER PICTURE 9999 VALUE 2191.
32080 02 FILLER PICTURE 9999 VALUE 2556.
32090 02 FILLER PICTURE 9999 VALUE 2922.
32100 02 FILLER PICTURE 9999 VALUE 3287.
32110 02 FILLER PICTURE 9999 VALUE 3652.
32120 02 FILLER PICTURE 9999 VALUE 4017.
32130 02 FILLER PICTURE 9999 VALUE 4383.

```

32140	02	FILLER	PICTURE 9999	VALUE 4748.	C98970
32150	02	FILLER	PICTURE 9999	VALUE 5113.	C98970
32160	02	FILLER	PICTURE 9999	VALUE 5478.	C98970
32170	02	FILLER	PICTURE 9999	VALUE 5844.	C98970
32180	02	FILLER	PICTURE 9999	VALUE 6209.	C98970
32190	02	FILLER	PICTURE 9999	VALUE 6574.	C98970
32200	02	FILLER	PICTURE 9999	VALUE 6939.	C98970
32210	02	FILLER	PICTURE 9999	VALUE 7305.	C98970
32220	01	DAY-IN-YEAR-TABLE REDEFINES DAYS-IN-YEARS SYNC.			C98970
32230	02	DAY-YEAR OCCURS 21 TIMES			C98970
32235			PICTURE 9999.		C98970
36000	01	FILLACCPY-IRAN-WORK SYNC.			C98970
36010	02	SERIAL	PICTURE 9(8).		C98970
36020	02	FILLER	PICTURE XX	VALUE SPACE.	C98970
36030	02	DAY-NO	PICTURE 59(4).		C98970
36040	02	FILLER	PICTURE X(65)	VALUE SPACE.	C98970
36050	02	RCOMK-0	PICTURE X	VALUE I#1.	C98970
50000		PROCEDURE DIVISION.			C98970
50010		OPEN-FILES.			C98970
50020		OPEN INPUT INCARDA.			C98970
50050		OPEN OUTPUT FILEACCPY.			C98970
50200		READ1.			C98970
50210		READ INCARDA			C98970
50220		AT END GO TO BLOCK-CHECK.			C98970
50230		ADD 1 TO RECORDS-READ.			C98970
50400		CONVERT-SERIAL-NO.			C98970
50410		COMPUTE SERIAL	> SER-1-2 * 1000000 < SER-3-6.		C98970
50500		JUAY-SETUP1.			C98970
50510		MOVE UA TO 10A.			C98970
50520		MOVE MO TO 1MO.			C98970
50530		MOVE YR TO 1YR.			C98970
50540		GO TO CONVERT-DATE.			C98970
50700		CONVERT-DATE.			C98970
50710		PERFORM DAYS-BEFORE-AFTER-DEC-31-64 THRU DAYS-END.			C98970
50720		GO TO WRITE-OUTPUT.			C98970
51000		DAYS-BEFORE-AFTER-DEC-31-64.			C98970
51010		COMPUTE JYR	> 1YR - 56.		C98970
51020		COMPUTE JDAY	> 10A < KDAY (1MO).		C98970
51030		IF JYR EQUAL 0 GO TO LEAP-YEAR.			C98970
51040		IF JYR EQUAL 4 GO TO LEAP-YEAR.			C98970
51050		IF JYR EQUAL 8 GO TO LEAP-YEAR.			C98970
51060		IF JYR EQUAL 12 GO TO LEAP-YEAR.			C98970
51070		IF JYR EQUAL 16 GO TO LEAP-YEAR.			C98970
51080		IF JYR EQUAL 20 GO TO LEAP-YEAR.			C98970
51090		GO TO JULIAN-DAYS.			C98970
51100		LEAP-YEAR.			C98970
51110		IF 1MO IS LESS THAN 3 GO TO JULIAN-DAYS.			C98970
51120		ADD 1 TO JDAY.			C98970
51130		JULIAN-DAYS.			C98970
51140		COMPUTE DAY-NO	> DAY-YEAR (JYR) < JDAY - 2922.		C98970
51150		DAYS-END.	EXIT.		C98970
60000		WRITE-OUTPUT.			C98970
60010		WRITE FILEACCPY-IRAN FROM FILEACCPY-IRAN-WORK.			C98970
60020		ADD 1 TO RECORDS-PASS.			C98970
60030		GO TO READ1.			C98970
60200		BLOCK-CHECK.			C98970
60210		GO TO CLOSE-FILES.			C98970
60300		CLOSE-FILES.			C98970
60310		CLOSE INCARDA WITH LOCK.			C98970
60320		CLOSE FILEACCPY WITH LOCK.			C98970
60330		DISPLAY : CARDS READ 1 RECORDS-READ UPON CONSOLE.			C98970
60340		DISPLAY : RECORDS-OT 1 RECORDS-PASS UPON CONSOLE.			C98970
60350		DISPLAY : EOL C9897 1 UPON CONSOLE.			C98970
60360		GOBACK.			C98970
/*		PLACE COBOL SOURCE BEFORE THIS CARD			
//CHG.TF6IN		DD *SPACE(CYL,C1,1)]			1440 CDS
TF6 TU12	11	0012080			
57 229 0		7 158 1 1			
57 230 0		6 158 1 1			
57 231 0		7 158 1 1			
57 232 0		7 158 1 1			
57 235 0		8 158 1 1			
57 236 0		9 158 1 1			
57 237 0		9 158 1 1			
57 241 0		9 158 1 1			
57 243 0		10 158 1 1			
57 244 0		12 158 1 1			
57 245 0		11 158 1 1			
57 246 0		3 159 1 1			
572453 0		4 159 1 1			
572455 0		4 159 1 1			
572456 0		5 159 1 1			
572457 0		4 159 1 1			
572458 0		4 159 1 1			
572459 0		5 159 1 1			

572460 0	4 159 1 1
572461 0	5 159 1 1
572463 0	5 159 1 1
572464 0	5 159 1 1
572465 0	6 159 1 1
572466 0	4 159 1 1
572467 0	5 159 1 1
572469 0	5 159 1 1
572470 0	5 159 1 1
572472 0	5 159 1 1
572473 0	5 159 1 1
572475 0	6 159 1 1
572476 0	6 159 1 1
572477 0	6 159 1 1
572478 0	6 159 1 1
572480 0	6 159 1 1
572481 0	6 159 1 1
572482 0	6 159 1 1
572483 0	7 159 1 1
572485 0	7 159 1 1
572486 0	7 159 1 1
572487 0	7 159 1 1
572490 0	8 159 1 1
572491 0	7 159 1 1
572492 0	7 159 1 1
572493 0	8 159 1 1
572494 0	7 159 1 1
572495 0	7 159 1 1
572496 0	9 159 1 1
572497 0	8 159 1 1
572498 0	9 159 1 1
572499 0	9 159 1 1
572500 0	9 159 1 1
572501 0	9 159 1 1
572502 0	9 159 1 1
572503 0	9 159 1 1
572504 0	9 159 1 1
572505 0	9 159 1 1
572506 0	9 159 1 1
572508 0	9 158 1 1
572509 0	7 158 1 1
572510 0	9 158 1 1
572512 0	11 158 1 1
572514 0	10 158 1 1
572515 0	12 158 1 1
572517 0	5 159 1 1
572518 0	8 159 1 1
572520 0	7 159 1 1
572521 0	7 159 1 1
572522 0	7 159 1 1
572524 0	7 159 1 1
572526 0	9 159 1 1
572527 0	7 159 1 1
572528 0	7 159 1 1
572530 0	9 159 1 1
572531 0	9 159 1 1
572532 0	10 159 1 1
572533 0	10 159 1 1
572535 0	11 159 1 1
572536 0	11 159 1 1
572537 0	12 159 1 1
572538 0	12 159 1 1
572539 0	12 159 1 1
572540 0	12 159 1 1
572541 0	12 159 1 1
572543 0	12 159 1 1
572544 0	2 160 1 1
572545 0	2 160 1 1
572546 0	3 160 1 1
572547 0	4 160 1 1
58 759 0	10 159 1 1
58 760 0	9 159 1 1
58 764 0	9 159 1 1
58 765 0	9 159 1 1
58 766 0	10 159 1 1
58 767 0	10 159 1 1
58 768 0	9 159 1 1
58 769 0	4 159 1 1
58 772 0	10 159 1 1
58 773 0	10 159 1 1
58 774 0	10 159 1 1
58 775 0	9 159 1 1
58 776 0	10 159 1 1
58 777 0	10 159 1 1
58 778 0	11 159 1 1
58 779 0	10 159 1 1

58 780 0	11 159 1 1
58 781 0	11 159 1 1
58 782 0	11 159 1 1
58 783 0	11 159 1 1
58 784 0	10 159 1 1
58 785 0	11 159 1 1
58 786 0	11 159 1 1
58 787 0	11 159 1 1
58 788 0	10 159 1 1
58 789 0	10 159 1 1
58 790 0	11 159 1 1
58 791 0	12 159 1 1
58 792 0	11 159 1 1
58 793 0	12 159 1 1
58 797 0	11 159 1 1
58 798 0	11 159 1 1
58 900 0	3 160 1 1
58 901 0	4 160 1 1
58 902 0	5 160 1 1
58 903 0	6 160 1 1
58 904 0	6 160 1 1
59 001 0	11 159 1 1
59 002 0	11 159 1 1
59 003 0	11 159 1 1
59 004 0	11 159 1 1
59 005 0	11 159 1 1
59 006 0	12 159 1 1
59 007 0	12 159 1 1
59 008 0	12 159 1 1
59 009 0	12 159 1 1
59 010 0	12 159 1 1
59 011 0	12 159 1 1
59 012 0	12 159 1 1
59 014 0	12 159 1 1
59 015 0	12 159 1 1
59 016 0	12 159 1 1
59 018 0	12 159 1 1
59 019 0	1 160 1 1
59 020 0	1 160 1 1
59 021 0	1 160 1 1
59 022 0	1 160 1 1
59 023 0	2 160 1 1
59 024 0	1 160 1 1
59 025 0	1 160 1 1
59 026 0	1 160 1 1
59 027 0	2 160 1 1
59 028 0	1 160 1 1
59 030 0	1 160 1 1
59 031 0	2 160 1 1
59 032 0	2 160 1 1
59 033 0	1 160 1 1
59 034 0	2 160 1 1
59 035 0	3 160 1 1
59 036 0	2 160 1 1
59 037 0	3 160 1 1
59 038 0	2 160 1 1
59 040 0	2 160 1 1
59 042 0	3 160 1 1
59 043 0	2 160 1 1
59 044 0	3 160 1 1
59 046 0	2 160 1 1
59 047 0	3 160 1 1
59 048 0	3 160 1 1
59 049 0	3 160 1 1
59 051 0	3 160 1 1
59 052 0	3 160 1 1
59 053 0	4 160 1 1
59 054 0	3 160 1 1
59 056 0	3 160 1 1
59 057 0	4 160 1 1
59 058 0	4 160 1 1
59 059 0	3 160 1 1
59 060 0	4 160 1 1
59 062 0	4 160 1 1
59 063 0	5 160 1 1
59 064 0	5 160 1 1
59 065 0	4 160 1 1
59 066 0	4 160 1 1
59 067 0	5 160 1 1
59 068 0	5 160 1 1
59 069 0	5 160 1 1
59 071 0	5 160 1 1
59 072 0	5 160 1 1
59 074 0	6 160 1 1
59 075 0	6 160 1 1
59 076 0	6 160 1 1
59 077 0	6 160 1 1

```

59 078 0      6 160 1 1
59 079 0      6 160 1 1
59 080 0      6 160 1 1
59 081 0      6 160 1 1
59 082 0      6 160 1 1
59 083 0      6 160 1 1
59 084 0      6 160 1 1
59 085 0      6 160 1 1
59 086 0      6 160 1 1
59 088 0      7 160 1 1
59 089 0      7 160 1 1
59 090 0      7 160 1 1
59 091 0      7 160 1 1
59 092 0      7 160 1 1
59 093 0      8 160 1 1
59 094 0      7 160 1 1
59 095 0      7 160 1 1
59 096 0      8 160 1 1
59 097 0      7 160 1 1
59 099 0      8 160 1 1
59 100 0      8 160 1 1
59 101 0      7 160 1 1
59 102 0      8 160 1 1
59 103 0      8 160 1 1
59 104 0      7 160 1 1
59 105 0      8 160 1 1
59 106 0      8 160 1 1
59 108 0      8 160 1 1
59 109 0      8 160 1 1
59 110 0      8 160 1 1
59 112 0      10 160 1 1
59 115 0      11 160 1 1
59 116 0      11 160 1 1
59 118 0      11 160 1 1
59 119 0      11 160 1 1
59 121 0      9 160 1 1
59 122 0      11 160 1 1
59 123 0      11 160 1 1
59 125 0      11 160 1 1
59 126 0      11 160 1 1
59 127 0      9 160 1 1
59 128 0      11 160 1 1
59 129 0      12 160 1 1
59 130 0      11 160 1 1
59 131 0      11 160 1 1
59 132 0      11 160 1 1
59 133 0      12 160 1 1
59 134 0      1 161 1 1
59 135 0      12 160 1 1
59 136 0      1 161 1 1
59 137 0      1 161 1 1
59 138 0      1 161 1 1
59 140 0      1 161 1 1
59 141 0      1 161 1 1
59 143 0      1 161 1 1
59 144 0      1 161 1 1
59 145 0      2 161 1 1
59 146 0      1 161 1 1
59 147 0      2 161 1 1
59 148 0      1 161 1 1
59 149 0      6 160 1 1
59 151 0      6 160 1 1
59 152 0      7 160 1 1
59 153 0      7 160 1 1
59 155 0      8 160 1 1
59 157 0      8 160 1 1
59 158 0      10 160 1 1
59 159 0      9 160 1 1
59 160 0      11 160 1 1
59 161 0      9 160 1 1
59 162 0      12 160 1 1
59 163 0      12 160 1 1
59 164 0      1 161 1 1
59 165 0      1 161 1 1

```

\*END

```

/* PLACE TFG DATA BEFORE THIS CARD
//TPR.TU13 DO DISP>[OLD,PASS]
//TPR.TPR1N DO /*,SPACE>[TRK,[1,1]]
T/P TU12 12000802080
T/P TU13 12000802080
/* PLACE T/P CONTROL CARDS BEFORE THIS CARD

```

013-PASS

#### 6.4.2 IRAN PREPROCESSOR

[illegible]

31050	02	FILLER	PICTURE 999	VALUE 120.	C98970
31060	02	FILLER	PICTURE 999	VALUE 151.	C98970
31070	02	FILLER	PICTURE 999	VALUE 181.	C98970
31080	02	FILLER	PICTURE 999	VALUE 212.	C98970
31090	02	FILLER	PICTURE 999	VALUE 243.	C98970
31100	02	FILLER	PICTURE 999	VALUE 273.	C98970
31110	02	FILLER	PICTURE 999	VALUE 304.	C98970
31120	02	FILLER	PICTURE 999	VALUE 334.	C98970
31130	01	NO-DAYS-IN-YEAR REDEFINES DAYS-IN-YEAR SYNC.			C98970
31140	02	KUAYS OCCURS 12 TIMES			C98970
31150			PICTURE 999.		C98970
32000	01	DAYS-IN-YEARS SYNC.			C98970
32010	02	FILLER	PICTURE 9999	VALUE 0.	C98970
32020	02	FILLER	PICTURE 9999	VALUE 365.	C98970
32030	02	FILLER	PICTURE 9999	VALUE 730.	C98970
32040	02	FILLER	PICTURE 9999	VALUE 1095.	C98970
32050	02	FILLER	PICTURE 9999	VALUE 1461.	C98970
32060	02	FILLER	PICTURE 9999	VALUE 1826.	C98970
32070	02	FILLER	PICTURE 9999	VALUE 2191.	C98970
32080	02	FILLER	PICTURE 9999	VALUE 2556.	C98970
32090	02	FILLER	PICTURE 9999	VALUE 2922.	C98970
32100	02	FILLER	PICTURE 9999	VALUE 3287.	C98970
32110	02	FILLER	PICTURE 9999	VALUE 3652.	C98970
32120	02	FILLER	PICTURE 9999	VALUE 4017.	C98970
32130	02	FILLER	PICTURE 9999	VALUE 4383.	C98970
32140	02	FILLER	PICTURE 9999	VALUE 4748.	C98970
32150	02	FILLER	PICTURE 9999	VALUE 5113.	C98970
32160	02	FILLER	PICTURE 9999	VALUE 5478.	C98970
32170	02	FILLER	PICTURE 9999	VALUE 5844.	C98970
32180	02	FILLER	PICTURE 9999	VALUE 6209.	C98970
32190	02	FILLER	PICTURE 9999	VALUE 6574.	C98970
32200	02	FILLER	PICTURE 9999	VALUE 6939.	C98970
32210	02	FILLER	PICTURE 9999	VALUE 7305.	C98970
32220	01	DAY-IN-YEAR-TABLE REDEFINES DAYS-IN-YEARS SYNC.			C98970
32230	02	DAY-YEAR OCCURS 21 TIMES			C98970
32235			PICTURE 9999.		C98970
33000	01	FILLEVENT-IRAN-WORK2 SYNC.			C98970
33010	02	SER-I-2-2	PICTURE 99.		C98970
33020	02	SER-3-6-2	PICTURE 9999.		C98970
33030	02	SERIES-2	PICTURE X.		C98970
33040	02	FILLER	PICTURE XX.		C98970
33050	02	MO-STRT-2	PICTURE 99.		C98970
33060	02	DA-STRT-2	PICTURE 99.		C98970
33070	02	YR-STRT-2	PICTURE 99.		C98970
33080	02	FILLER	PICTURE X.		C98970
33090	02	MO-DONE-2	PICTURE 99.		C98970
33100	02	DA-DONE-2	PICTURE 99.		C98970
33110	02	YR-DONE-2	PICTURE 99.		C98970
33120	02	FILLER	PICTURE XXXX.		C98970
33130	02	FL-HRS-CUM-2	PICTURE 9999.		C98970
33140	02	FL-JEC-2	PICTURE X.		C98970
33150	02	FL-U-TENTH-2	PICTURE 9.		C98970
33160	02	FILLER	PICTURE XX.		C98970
33170	02	TYPE-CODE-2	PICTURE 99.		C98970
33180	02	FILLER	PICTURE X(33).		C98970
33190	02	MH-LABOR-2	PICTURE 9999.		C98970
33200	02	FILLER	PICTURE X(7).		C98970
34000	01	IRAN-OUT-WORKT SYNC.			C98970
34010	02	SERIAL-T	PICTURE 9(8)	VALUE ZEROS.	C98970
34020	02	SERIES-T	PICTURE X	VALUE SPACE.	C98970
34030	02	FILLER	PICTURE X	VALUE SPACE.	C98970
34040	02	ACCPY-DA-T	PICTURE 9(5)	VALUE ZEROS.	C98970
34050	02	FILLER	PICTURE X	VALUE SPACE.	C98970
34060	02	VISIT-T	PICTURE 9	VALUE ZEROS.	C98970
34065	02	FILLER	PICTURE X	VALUE SPACE.	C98970
34070	02	TYPE-CODE-T	PICTURE 99	VALUE ZEROS.	C98970
34080	02	FILLER	PICTURE X	VALUE SPACE.	C98970
34090	02	FL-HRS-C-T	PICTURE 9(5)	VALUE ZEROS.	C98970
34100	02	FILLER	PICTURE X	VALUE SPACE.	C98970
34110	02	AGE-STRT-T	PICTURE 999	VALUE ZEROS.	C98970
34120	02	FILLER	PICTURE X	VALUE SPACE.	C98970
34130	02	DA-NO-ST-T	PICTURE 9999	VALUE ZEROS.	C98970
34140	02	FILLER	PICTURE X	VALUE SPACE.	C98970
34150	02	DA-NO-FN-T	PICTURE 59999	VALUE ZEROS.	C98970
34160	02	FILLER	PICTURE X	VALUE SPACE.	C98970
34170	02	DURATION-DA-T	PICTURE 999	VALUE ZEROS.	C98970
34180	02	FILLER	PICTURE X	VALUE SPACE.	C98970
34190	02	MH-LABOR-T	PICTURE 9999	VALUE ZEROS.	C98970
34200	02	FILLER	PICTURE X	VALUE SPACE.	C98970
34210	02	TYPE-CODE-N-T-S	PICTURE 99	VALUE ZEROS.	C98970
34220	02	FILLER	PICTURE X	VALUE SPACE.	C98970
34230	02	FL-HRS-C-NXT-S	PICTURE 9(5)	VALUE ZEROS.	C98970
34240	02	FILLER	PICTURE X	VALUE SPACE.	C98970
34250	02	DA-NO-ST-NX-S	PICTURE 59999	VALUE ZEROS.	C98970
34260	02	FILLER	PICTURE X	VALUE SPACE.	C98970
34270	02	INTERVAL-DA-T	PICTURE 9999	VALUE ZEROS.	C98970

34280	02	FILLER	PICTURE X	VALUE SPACE.	C98970
34290	02	INT-MO-T	PICTURE 999	VALUE ZEROS.	C98970
34300	02	FILLER	PICTURE X	VALUE SPACE.	C98970
34310	02	INT-FL-HRS-1	PICTURE 9[5]	VALUE ZEROS.	C98970
34320	02	FILLER	PICTURE X	VALUE SPACE.	C98970
34330	02	R-MARK-T	PICTURE X	VALUE SPACE.	C98970
34400	01	IRAN-OUT-WORKO SYNC.			C98970
34410	02	SERIAL-0	PICTURE 9[8]	VALUE ZEROS.	C98970
34420	02	SERIES-0	PICTURE X	VALUE SPACE.	C98970
34430	02	FILLER	PICTURE XX	VALUE SPACE.	C98970
34440	02	ACPT-DA-0	PICTURE 59[4]	VALUE ZEROS.	C98970
34450	02	FILLER	PICTURE X	VALUE SPACE.	C98970
34460	02	VISIT-0	PICTURE 4	VALUE ZEROS.	C98970
34465	02	FILLER	PICTURE X	VALUE SPACE.	C98970
34470	02	TYPL-CODE-0	PICTURE 99	VALUE ZEROS.	C98970
34480	02	FILLER	PICTURE X	VALUE SPACE.	C98970
34490	02	FL-HRS-C-0	PICTURE 9[5]	VALUE ZEROS.	C98970
34500	02	FILLER	PICTURE X	VALUE SPACE.	C98970
34510	02	AGE-STRT-0	PICTURE 999	VALUE ZEROS.	C98970
34520	02	FILLER	PICTURE X	VALUE SPACE.	C98970
34530	02	DA-NO-ST-0	PICTURE 59999	VALUE ZEROS.	C98970
34540	02	FILLER	PICTURE X	VALUE SPACE.	C98970
34550	02	DA-NO-FN-0	PICTURE 59999	VALUE ZEROS.	C98970
34560	02	FILLER	PICTURE X	VALUE SPACE.	C98970
34570	02	DURATION-DA-0	PICTURE 999	VALUE ZEROS.	C98970
34580	02	FILLER	PICTURE X	VALUE SPACE.	C98970
34590	02	WH-LABOR-0	PICTURE 9999	VALUE ZEROS.	C98970
34600	02	FILLER	PICTURE X	VALUE SPACE.	C98970
34610	02	TYPL-CODE-NAT-0	PICTURE 99	VALUE ZEROS.	C98970
34620	02	FILLER	PICTURE X	VALUE SPACE.	C98970
34630	02	FL-HRS-C-NXT-0	PICTURE 9[5]	VALUE ZEROS.	C98970
34640	02	FILLER	PICTURE X	VALUE SPACE.	C98970
34650	02	DA-NO-ST-NXT-0	PICTURE 59999	VALUE ZEROS.	C98970
34660	02	FILLER	PICTURE X	VALUE SPACE.	C98970
34670	02	INTERVAL-DA-0	PICTURE 9999	VALUE ZEROS.	C98970
34680	02	FILLER	PICTURE X	VALUE SPACE.	C98970
34690	02	INTERVAL-WK-0	PICTURE 999	VALUE ZEROS.	C98970
34700	02	FILLER	PICTURE X	VALUE SPACE.	C98970
34710	02	INT-FL-HRS-0	PICTURE 9[5]	VALUE ZEROS.	C98970
34720	02	FILLER	PICTURE X	VALUE SPACE.	C98970
34730	02	R-MARK-0	PICTURE X	VALUE 1#1.	C98970
35000	01	IRANREPORT-WORKP SYNC.			C98970
35010	02	FILLER	PICTURE X[5]	VALUE SPACE.	C98970
35020	02	SERIAL-R	PICTURE X[8]	VALUE SPACE.	C98970
35030	02	SERIES-R	PICTURE X	VALUE SPACE.	C98970
35040	02	FILLER	PICTURE X	VALUE SPACE.	C98970
35050	02	ACPT-DA-R	PICTURE -[5].	VALUE SPACE.	C98970
35060	02	FILLER	PICTURE X	VALUE SPACE.	C98970
35070	02	VISIT-R	PICTURE X	VALUE SPACE.	C98970
35080	02	FILLER	PICTURE X	VALUE SPACE.	C98970
35090	02	TYPL-CODE-R	PICTURE 29.	VALUE SPACE.	C98970
35100	02	FILLER	PICTURE X	VALUE SPACE.	C98970
35110	02	FL-HRS-C-R	PICTURE ZZZZ9.	VALUE SPACE.	C98970
35120	02	FILLER	PICTURE X	VALUE SPACE.	C98970
35130	02	AGE-STRT-R	PICTURE 229.	VALUE SPACE.	C98970
35150	02	DA-NO-ST-R	PICTURE -[5].	VALUE SPACE.	C98970
35170	02	DA-NO-FN-R	PICTURE -[5].	VALUE SPACE.	C98970
35180	02	FILLER	PICTURE X	VALUE SPACE.	C98970
35190	02	DURATION-DA-R	PICTURE 229.	VALUE SPACE.	C98970
35200	02	FILLER	PICTURE X	VALUE SPACE.	C98970
35210	02	WH-LABOR-R	PICTURE X[4]	VALUE SPACE.	C98970
35220	02	FILLER	PICTURE X	VALUE SPACE.	C98970
35230	02	TYPL-CODE-NAT-R	PICTURE 29.	VALUE SPACE.	C98970
35240	02	FILLER	PICTURE X	VALUE SPACE.	C98970
35250	02	FL-HRS-C-NXT-R	PICTURE ZZZZ9.	VALUE SPACE.	C98970
35260	02	FILLER	PICTURE X	VALUE SPACE.	C98970
35270	02	DA-NO-ST-NXT-R	PICTURE ZZZ9.	VALUE SPACE.	C98970
35280	02	FILLER	PICTURE X	VALUE SPACE.	C98970
35290	02	INTERVAL-DA-R	PICTURE 2229.	VALUE SPACE.	C98970
35300	02	FILLER	PICTURE X	VALUE SPACE.	C98970
35310	02	INTERVAL-WK-R	PICTURE 229.	VALUE SPACE.	C98970
35320	02	FILLER	PICTURE X	VALUE SPACE.	C98970
35330	02	INT-FL-HRS-R	PICTURE ZZZZ9.	VALUE SPACE.	C98970
35340	02	FILLER	PICTURE XX	VALUE SPACE.	C98970
35350	02	MO-STRT-R	PICTURE XX	VALUE SPACE.	C98970
35360	02	FILLER	PICTURE X	VALUE SPACE.	C98970
35370	02	TA-STRT-R	PICTURE XX	VALUE SPACE.	C98970
35380	02	FILLER	PICTURE X	VALUE SPACE.	C98970
35390	02	YR-STRT-R	PICTURE XX	VALUE SPACE.	C98970
35400	02	FILLER	PICTURE XX	VALUE SPACE.	C98970
35410	02	MO-CONF-R	PICTURE XX	VALUE SPACE.	C98970
35420	02	FILLER	PICTURE X	VALUE SPACE.	C98970
35430	02	DA-JONE-R	PICTURE XX	VALUE SPACE.	C98970
35440	02	FILLER	PICTURE X	VALUE SPACE.	C98970
35450	02	YR-CONF-R	PICTURE XX	VALUE SPACE.	C98970
35460	02	FILLER	PICTURE X[16]	VALUE SPACE.	C98970
35470	02	WEEK-M-R	PICTURE X	VALUE 1#1.	C98970



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35600 01 FILEACCPY-IRANW SYNC. C98970
35610 02 SERIAL PICTURE 9[8] VALUE ZEROS. C98970
35620 02 FILLER PICTURE XX. C98970
35630 02 DAY-NO-A PICTURE 59[4] VALUE ZEROS. C98970
35640 02 FILLER PICTURE X[65]. C98970
35650 02 RCDMK-O PICTURE X. C98970
37000 01 IRANREPORT-TITLE-A SYNC. C98970
37010 02 CAR-CODE-A PICTURE X VALUE :1:. C98970
37020 02 FILLER PICTURE X[14] VALUE SPACE. C98970
37030 02 T-10-24-A PICTURE X[9] VALUE :ACCPY V T:. C98970
37040 02 FILLER PICTURE X[12] VALUE SPACE. C98970
37050 02 T-37-55-A PICTURE X[19] VALUE :STRT CMPL DAYS 1. C98970
37060 02 T-50-71-A PICTURE X[16] VALUE :--NEXT IRAN-- --1. C98970
37070 02 T-72-90-A PICTURE X[19] VALUE :INTERVALS-- 1. C98970
37080 02 T-91-99-A PICTURE X[9] VALUE : PAGE1. C98970
37090 02 PAGE-NO-A PICTURE 2229. C98970
37095 02 FILLER PICTURE X[10] VALUE SPACE. C98970
37100 02 T-114-120-A PICTURE X[7] VALUE : 1. C98970
37200 01 IRANREPORT-TITL-B SYNC. C98970
37210 02 CAR-CODE-B PICTURE X VALUE SPACE. C98970
37220 02 FILLER PICTURE X[14] VALUE SPACE. C98970
37230 02 T-10-32-B PICTURE X[17] VALUE :DATE 1 Y F/M 1. C98970
37240 02 T-33-49-B PICTURE X[17] VALUE :AGE DATE DATE IN1. C98970
37250 02 FILLER PICTURE X[6] VALUE SPACE. C98970
37260 02 T-50-71-B PICTURE X[16] VALUE :T F/M STRT 1. C98970
37270 02 T-72-90-B PICTURE X[9] VALUE : WK FH1. C98970
37280 02 FILLER PICTURE X[5] VALUE SPACE. C98970
37290 02 T-80-95-B PICTURE X[10] VALUE :START 1. C98970
37300 02 T-90-105-B PICTURE X[10] VALUE :COMPLETE 1. C98970
37310 02 FILLER PICTURE X[14] VALUE SPACE. C98970
37320 02 T-120-B PICTURE X VALUE :1:. C98970
37400 01 IRANREPORT-TITL-C SYNC. C98970
37410 02 CAR-CODE-C PICTURE X VALUE SPACE. C98970
37420 02 FILLER PICTURE X[4] VALUE SPACE. C98970
37430 02 T-6-15-C PICTURE X[10] VALUE :SERIAL 1. C98970
37440 02 T-10-32-C PICTURE X[17] VALUE :CODE S P X10 1. C98970
37450 02 T-33-49-C PICTURE X[17] VALUE :WK. CODE CODE IRA1. C98970
37460 02 T-50-55-C PICTURE X[6] VALUE :IN M/H 1. C98970
37470 02 T-50-74-C PICTURE X[19] VALUE :Y X10 DATE DAYS 1. C98970
37480 02 T-75-85-C PICTURE X[11] VALUE :X10 X10 1. C98970
37482 02 T-80-95-C PICTURE X[10] VALUE :MO DA YR 1. C98970
37485 02 T-90-105-C PICTURE X[10] VALUE :MO DA YR 1. C98970
37490 02 FILLER PICTURE X[14] VALUE SPACE. C98970
37500 02 T-120-C PICTURE X VALUE :1:. C98970
37600 01 IRANREPORT-TITLE-D SYNC. C98970
37610 02 CAR-CODE-D PICTURE X VALUE SPACE. C98970
37620 02 FILLER PICTURE X[118] VALUE SPACE. C98970
37630 02 T-120-D PICTURE X VALUE :1:. C98970
46000 01 NINES-8 PICTURE 9[8] SYNC VALUE 99999999. C98970
46010 01 JFLAG PICTURE 9 SYNC VALUE ZERO. C98970
46020 01 IFLAG PICTURE 9 SYNC VALUE ZERO. C98970
46030 01 PAGE-CNT PICTURE 9999 SYNC VALUE ZERO. C98970
46050 01 LINE-CNT PICTURE 99 SYNC VALUE ZERO. C98970
46060 01 LINE-MAX-50 PICTURE 99 SYNC VALUE 50. C98970
46070 01 LAST-1 PICTURE 9 SYNC VALUE 0. C98970
46080 01 DAY-NO PICTURE 59[4]. C98970
46090 01 DA-NO-FIN-S PICTURE 59[4] VALUE ZEROS. C98970
46100 01 RCD5-ACCPY PICTURE 9[6] SYNC VALUE 0. C98970
46110 01 SPACE-CNT PICTURE 9[6] SYNC VALUE 0. C98970
46120 01 LINES-OUT PICTURE 9[6] SYNC VALUE 0. C98970
50000 PROCEDURE DIVISION. C98970
50010 OPEN-FILES. C98970
50020 OPEN INPUT FILEACCPY. C98970
50030 OPEN INPUT FILEEVENT. C98970
50040 OPEN OUTPUT IRANOUT. C98970
50050 OPEN OUTPUT IRANREPORT. C98970
50090 INITIALIZE-PAGE. C98970
50110 PERFORM TITLE-S THRU TITLE-S-END. C98970
50200 READ-FIRST-EVENT. C98970
50210 READ FILEEVENT INTO FILEEVENT-IRAN-WORK2 C98970
50220 AT END GO TO EOF-FIRST-EVENT. C98970
50225 MOVE TYPE-CODE-2 TO TYPE-CODE-NXT-0. C98970
50227 ADD 1 TO RECORDS-READ. C98970
50230 COMPUTE SERIAL-1 > SER-1-2-2 * 1000000 < SER-3-6-2. C98970
50240 CALC-START-IRAN-UNITS. C98970
50250 PERFORM DAY-NUMBERS THRU DAY-NUMBERS-END. C98970
50300 NEW-SERIAL-10. C98970
50310 IF SERIAL EQUAL SERIAL-T GO TO SAME-120. C98970
50320 IF SERIAL EQUAL NINES-8 GO TO SAME-SERIAL-TEST-100. C98970
50330 GO TO READ-NEXT-ACCEPTANCE-DATE-80. C98970
50700 DAY-NUMBERS. C98970
50710 MOVE ZERO TO DA-NO-ST-NXT-0 DA-NO-FN-T. C98970
50715 IF YR-SIRT-2 IS LESS THAN 1 GO TO FINISH-DAYS. C98970
50720 MOVE MO-STRT-2 TO IMO. C98970
50730 MOVE DA-STRT-2 TO IDA. C98970

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50740 MOVE YR-STRT-2 TO IYR. C98970
50750 PERFORM DAYS-BEFORE-AFTER-DEC-31-64 THRU DAYS-END. C98970
50760 MOVL DAY-NO TO DA-NO-ST-NXT-0. C98970
50800 FINISH-DAYS. C98970
50802 IF MO-DONE-2 EQUAL SPACE MOVE ZEROS TO MO-DONE-2. C98970
50804 IF DA-DONE-2 EQUAL SPACE MOVE ZEROS TO DA-DONE-2. C98970
50806 IF YR-DONE-2 EQUAL SPACE MOVE ZEROS TO YR-DONE-2. C98970
50810 IF YR-DONE-2 IS LESS THAN 1 GO TO CALC-FLIGHT-HRS-NXT. C98970
50820 MOVE MO-DONE-2 TO IMO. C98970
50830 MOVE DA-DONE-2 TO IDA. C98970
50840 MOVE YR-DONE-2 TO IYR. C98970
50850 PERFORM DAYS-BEFORE-AFTER-DEC-31-64 THRU DAYS-END. C98970
50860 MOVE DAY-NO TO DA-NO-FN-T. C98970
50870 CALC-FLIGHT-HRS-NXT. C98970
50872 IF FL-HRS-CUM-2 EQUAL SPACE MOVE ZEROS TO FL-HRS-CUM-2. C98970
50875 IF FL-O-TENTH-2 EQUAL SPACE MOVE ZEROS TO FL-O-TENTH-2. C98970
50880 COMPUTE FL-HRS-C-NXT-0 > FL-HRS-CUM-2 * 10 < FL-O-TENTH-2. C98970
50890 DAY-NUMBERS-END. EXIT. C98970
51000 DAYS-BEFORE-AFTER-DEC-31-64. C98970
51010 COMPUTE IYR > IYR - 56. C98970
51020 COMPUTE JDAY > IDA < KDAY [IMO]. C98970
51030 IF JYH EQUAL 0 GO TO LEAP-YEAR. C98970
51040 IF JYH EQUAL 4 GO TO LEAP-YEAR. C98970
51050 IF JYH EQUAL 8 GO TO LEAP-YEAR. C98970
51060 IF JYH EQUAL 12 GO TO LEAP-YEAR. C98970
51070 IF JYH EQUAL 16 GO TO LEAP-YEAR. C98970
51080 IF JYH EQUAL 20 GO TO LEAP-YEAR. C98970
51090 GO TO JULIAN-DAYS. C98970
51100 LEAP-YEAR. C98970
51110 IF IMO IS LESS THAN 3 GO TO JULIAN-DAYS. C98970
51120 ADD 1 TO JDAY. C98970
51130 JULIAN-DAYS. C98970
51140 COMPUTE DAY-NO > DAY-YEAR [JYR] < JDAY - 2922. C98970
51150 DAYS-END. EXIT. C98970
51300 TITLE-S. C98970
51310 ADD 1 TO PAGE-CNT. C98970
51320 MOVL PAGE-CNT TO PAGE-NO-A. C98970
51330 WRITE IRANREPORT-PRE FROM IRANREPORT-TITLE-A. C98970
51340 WRITE IRANREPORT-PRE FROM IRANREPORT-TITLE-B. C98970
51350 WRITE IRANREPORT-PRE FROM IRANREPORT-TITLE-C. C98970
51360 WRITE IRANREPORT-PRE FROM IRANREPORT-TITLE-D. C98970
51370 TITLE-S-END. EXIT. C98970
52000 READ-NEXT-ACCEPTANCE-DATF-80. C98970
52010 READ FILEACPT INTO FILEACPT-IRANW C98970
52020 AT END GO TO SET-NINES-B-90. C98970
52025 ADD 1 TO RCUS-ACPT. C98970
52030 GO TO SAME-SERIAL-TEST-100. C98970
52040 SET-NINES-B-90. C98970
52050 MOVE NINES-B TO SERIAL. C98970
52060 SAME-SERIAL-TEST-100. C98970
52070 IF SERIAL EQUAL SERIAL-T GO TO SAME-120. C98970
52080 IF SERIAL IS LESS THAN SERIAL-T C98970
52090 GO TO READ-NEXT-ACCEPTANCE-DATE-90. C98970
52100 MOVE 11 TO JFLAG. C98970
52110 SAME-120. C98970
52120 IF IFLAG EQUAL ZERO GO TO ACPT-DATF-CODE-130. C98970
52130 MOVL TYPE-CODE-NXT-S TO TYPL-CODE-NXT-0. C98970
52140 MOVL DA-NO-ST-NAT-S TO DA-NO-ST-NXT-0. C98970
52150 MOVE DA-NO-FN-S TO DA-NO-FN-T. C98970
52160 MOVE FL-HRS-C-NXT-S TO FL-HRS-C-NXT-0. C98970
52170 MOVE ZERO TO VISIT-0 IFLAG. C98970
52200 ACPT-DATF-CODE-130. C98970
52210 MOVE ZERO TO ACPT-DA-0. C98970
52220 IF JFLAG EQUAL ZERO MOVE DAY-NO-A TO ACPT-DA-0 C98970
52230 ACPT-DA-R. C98970
52240 MOVE ZERO TO JFLAG. C98970
52250 REPEAT-SAME-SLR-SAVE-PRIOR-140. C98970
52260 MOVE SERIAL-T TO SERIAL-0 SERIAL-R. C98970
52270 MOVE SLR-ILS-2 TO SERIES-0 SERIES-R. C98970
52280 MOVE MO-STRT-2 TO MO-STRT-R. C98970
52290 MOVL UA-STRT-2 TO UA-STRT-R. C98970
52300 MOVE YR-STRT-2 TO YR-STRT-R. C98970
52310 MOVE MO-DONE-2 TO MO-DONE-R. C98970
52320 MOVE DA-DONE-2 TO DA-DONE-R. C98970
52330 MOVL YR-DONE-2 TO YR-DONE-R. C98970
52340 MOVE TYPE-CODE-NXT-0 TO TYPE-CODE-0 TYPE-CODE-R. C98970
52350 MOVE MH-LABOR-2 TO MH-LABOR-0 MH-LABOR-R. C98970
52360 MOVE FL-HRS-C-NXT-0 TO FL-HRS-C-0 FL-HRS-C-R. C98970
52370 MOVL DA-NO-ST-NAT-0 TO DA-NO-ST-0 DA-NO-ST-R. C98970
52380 MOVL DA-NO-FN-T TO DA-NO-FN-0 DA-NO-FN-R. C98970
52385 AGE-CALC. C98970
52390 MOVE ZERO TO AGE-STRT-0 DURATION-DA-0. C98970
52410 IF ACPT-DA-0 EQUAL ZERO GO TO DURA-DA-CALC. C98970
52420 IF YR-STRT-R EQUAL ZERO GO TO DURA-DA-CALC. C98970
52430 COMPUTE AGE-STRT-0 > [DA-NO-ST-0 - ACPT-DA-0] / 7. C98970
52440 DURA-DA-CALC. C98970
52450 IF YR-STRT-R EQUAL ZERO GO TO READ-NEXT-IRAN-EVENT. C98970

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52460 IF YR-DUNE-R EQUAL ZERO GO TO READ-NEXT-IRAN-EVENT, C98970
52470 COMPUTE DURATION-DA-0 > DA-NO-FN-0 - DA-NO-ST-0, C98970
52500 READ-NEXT-IRAN-EVENT, C98970
52510 READ FILEEVENT INTO FILEEVENT-IRAN-WORK2 C98970
52520 AT END GO TO LAST-I-150. C98970
52525 ADD 1 TO RECORDS-READ, C98970
52530 GO TO NEXT-VISIT-160. C98970
52540 LAST-I-150. C98970
52550 MOVE II: TO LAST-1. C98970
52560 NEXT-VISIT-160. C98970
52570 ADD 1 TO VISIT-V. C98970
52580 IF LAST-1 EQUAL ZERO MOVE TYPE-CODE-2 TO TYPE-CODE-NXT-0. C98970
52600 DAY-NOS-AND-FLIGHT-HRS. C98970
52610 PERFORM DAY-NUMBERS THRU DAY-NUMBERS-END. C98970
52620 COMPUTE SERIAL- > SER-I-2-2 * 1000000 < SER-3-6-2. C98970
52630 IF SERIAL-T EQUAL SERIAL-0 GO TO SER-SAME-180. C98970
52640 NEW-SERIAL-170-SAVE-NULL-OUTP. C98970
52650 MOVE TYPE-CODE-NXT-0 TO TYPE-CODE-NXT-S. C98970
52660 MOVL OA-NO-ST-NXT-0 TO OA-NO-ST-NXT-S. C98970
52670 MOVE OA-NO-FN-T TO OA-NO-FN-S. C98970
52680 MOVE FL-HRS-L-NXT-0 TO FL-HRS-C-NXT-S. C98970
52690 END-FILE-MOVES-175. C98970
52700 MOVE ZERO TO TYPE-CODE-NXT-0 DA-NO-ST-NXT-0. C98970
52710 MOVE ZERO TO TYPE-CODE-NXT-R OA-NO-ST-NXT-R. C98970
52720 MOVE ZERO TO FL-HRS-C-NXT-0 FL-HRS-C-NXT-R. C98970
52730 MOVE ZERO TO INTERVAL-DA-0 INT-FL-HRS-0. C98970
52740 MOVE ZERO TO INTERVAL-DA-R INT-FL-HRS-R. C98970
52750 MOVL ZERO TO INTERVAL-WK-R. C98970
52760 MOVE ZERO TO INTERVAL-WK-0. C98970
52770 MOVL II: TO IFL'G. C98970
52775 IF LAST-I EQUAL II: GO TO LAST-OUTPUT-195. C98970
52780 GO TO WRITE-OUTPUT-190. C98970
52800 SER-SAME-180. C98970
52810 MOVE ZERO'S TO INTERVAL-DA-0. C98970
52820 MOVE ZERO'S TO INTERVAL-WK-0 INT-FL-HRS-0. C98970
52830 IF YR-STRT-2 EQUAL ZERO GO TO CALC-INTERVAL-WK. C98970
52840 IF YR-DUNE-R EQUAL ZERO GO TO CALC-INTERVAL-WK. C98970
52850 CALC-INTERVAL-OAY. C98970
52860 COMPUTE INTERVAL-OA-0 > OA-NO-ST-NXT-0 - OA-NO-FN-0. C98970
52870 CALC-INTERVAL-WK. C98970
52880 IF INTERVAL-DA-0 IS NOT GREATER THAN ZERO C98970
52890 GO TO CALC-INT-FL-HRS. C98970
52900 COMPUTE INTERVAL-WK-0 > INTERVAL-DA-0 * 7 / 10. C98970
52910 CALC-INT-FL-HRS. C98970
52920 IF FL-HRS-C-NXT-0 IS GREATER THAN ZERO GO TO TEST-2. C98970
52930 GO TO WRITE-OUTPUT-190. C98970
52940 TEST-2. C98970
52950 IF FL-HRS-C-0 IS GREATER THAN ZERO GO TO CALC-INTERVAL. C98970
52960 GO TO WRITE-OUTPUT-190. C98970
52970 CALC-INTERVAL. C98970
52980 COMPUTE INT-FL-HRS-0 > FL-HRS-C-NXT-0 - FL-HRS-C-0. C98970
53000 WRITE-OUTPUT-190. C98970
53090 IF LAST-I EQUAL II: GO TO END-FILE-MOVES-175. C98970
53095 LAST-OUTPUT-195. C98970
53100 MOVL VISIT-0 TO VISIT-R. C98970
53110 MOVL AGE-STRT-0 TO AGE-STRT-R. C98970
53120 MOVE DURATION-DA-0 TO DURATION-DA-R. C98970
53130 MOVE TYPE-CODE-NXT-0 TO TYPE-CODE-NXT-R. C98970
53140 MOVE FL-HRS-C-N-T-0 TO FL-HRS-C-NXT-R. C98970
53150 MOVE DA-NO-ST-NXT-0 TO DA-NO-ST-NXT-R. C98970
53160 MOVE INTERVAL-DA-0 TO INTERVAL-DA-R. C98970
53170 MOVE INTERVAL-WK-0 TO INTERVAL-WK-R. C98970
53180 MOVE INT-FL-HRS-0 TO INT-FL-HRS-R. C98970
53500 WRITE IRANOUT-PHE FROM IRAN-OUT-WORK0. C98970
53510 WRITE IRANREPORT-PRE FROM IRANREPORT-WORKR. C98970
53520 ADD 1 TO RECORD-PASS. C98970
53530 IF LAST-1 EQUAL II: GO TO END-FILE-2-240. C98970
53540 ADD 1 TO LINE-CNT. C98970
53550 IF IFLAG EQUAL ZERO C98970
53560 GO TO REPEAT-SAME-SER-SAVE-PRIOR-140. C98970
53570 IF LINE-CNT IS LESS THAN 50 GO TO PRINT-BLANK-LINE-220. C98970
53580 NEW-PAGL. C98970
53590 PERFORM TITLE-S THRU TITLE-S-END. C98970
53600 MOVE ZERO TO LINE-CNT. C98970
53610 GO TO NEW-SERIAL-170. C98970
53620 PRINT-BLANK-LINE-220. C98970
53630 WRITE IRANREPORT-PRE FROM IRANREPORT-TITLE-D. C98970
53640 ADD 1 TO LINE-CNT. C98970
53645 ADD 1 TO SPACE-CNT. C98970
53650 GO TO NEW-SERIAL-170. C98970
53660 END-FILE-2-240. C98970
62000 BLOCK-CHECK. C98970
62010 COMPUTE KOUNT > RECORDS-PASS - [(RECORDS-PASS / 30) * 30]. C98970
62020 IF KOUNT EQUAL ZERO GO TO BLOCK-CHECK-2. C98970
62040 LOOP3. C98970
62050 WRITE IRANOUT-PHE FROM NINE. C98970

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62060      ADD 1 TO KOUNT.                                C98970
62070      IF KOUNT IS LESS THAN 30 GO TO LOOP3.         C98970
62100      BLOCK-CHECK=2.                                C98970
62110      COMPUTE LINES-OUT > 4 * PAGE-CNT < RECORDS-PASS < SPACE-CNT. C98970
62115      COMPUTE KNT > LINES-OUT - [(LINES-OUT / 25) * 25]. C98970
62120      IF KNT EQUAL ZERO GO TO CLOSE-FILES.          C98970
62130      LOOP4.                                         C98970
62140      WRITE IRANREPORT-PRE FROM IRANREPORT-TITLE-D. C98970
62150      ADD 1 TO KNT.                                   C98970
62160      IF KNT IS LESS THAN 25 GO TO LOOP4.           C98970
62170      GO TO CLOSE-FILES.                             C98970
63900      EOF-FIRST-EVENT.                               C98970
63910      DISPLAY : NO EVNTS : UPON CONSOLE.             C98970
64000      CLOSE-FILES.                                   C98970
64010      CLOSE FILEACCPY WITH LOCK.                    C98970
64020      CLOSE FILEEVENT WITH LOCK.                    C98970
64030      CLOSE IRANRPT WITH LOCK.                      C98970
64040      CLOSE IRANREPORT WITH LOCK.                   C98970
64100      DISPLAY : ACCEPT IN : RCDS-ACCEPT UPON CONSOLE. C98970
64110      DISPLAY : EVENT IN : RECORDS-READ UPON CONSOLE. C98970
64120      DISPLAY : IRAN OUT : RECORDS-PASS UPON CONSOLE. C98970
64140      DISPLAY : EOJ C9897 : UPON CONSOLE.            C98970
64150      GOBACK.                                        C98970
/*      PLACE COBOL SOURCE BEFORE THIS CARD
//CHG,TF61N DD *SPACE>CYL,(1:1)
TF6 TU14 11 0012080
57 230A 091064 111664 834.7 1065 01 29 66
57 230A 100465 110965 1041.1 2066 01 88 74
57 230A 100768 122468 1924.8 1068 01 4245 124 35
57 231A 092864 120164 920.5 1065 01 79 63
57 231A 101465 111765 189.1 2066 01 88 33
57 231A 112068 030669 2004.7 1069 01 4507 128 79
570231A 042071 2680.0 10 02 90 52
57 232A 111565 011766 989.6 2066 02 114 92
57 232A 112067 022168 1478.7 1068 02 4140 140 73
57 232A 021670 032970 2036.6 1070 03 85 30
57 235A 070665 080665 1002.3 2066 03 96 63
57 235A 072666 091966 1211.0 3066 03 3676 100 88
57 235A 100266 123066 1233.1 2066 03 4463 129 67
57 235A 032169 052969 1749.3 1069 04 88 43
57 236A 120965 012266 1307.4 2066 04 4117 112 76
57 236A 110267 011868 1788.8 1068 04 3906 126 33
57 236A 012270 032570 1292.9 1070 04 88 58
57 237A 113065 012066 1128.6 2066 04 4110 113 69
57 237A 110467 021468 1548.1 1068 04 4145 136 72
57 237A 103069 011270 1106.0 1070 05 90 37
57 241A 031565 042165 1134.6 2065 05 105 50
57 241A 061466 080366 1521.5 3067 05 4022 124 63
57 241A 112466 012767 1593.7 1067 05 4878 136 74
57 241A 111968 020369 1047.8 1069
570241A 042271 2650.4 10
57 243A 012165 022065 1034.0 2065 05 78 37
57 243A 022366 040166 1198.1 3066 05 90 38
57 243A 011968 040360 1681.2 1068 05 4334 126 79
57 243A 032670 060170 2251.8 1070 05 4394 150 65
57 244A 120665 012866 1332.4 6265 04 97 55
57 244A 121366 022867 1552.1 1067 04 3173 110 75
57 244A 031169 050769 2147.9 1069 04 4507 138 65
57 245A 111765 010566 1083.5 2066 02 100 50
57 245A 042268 071168 1698.0 1068 02 3966 129 73
570245A 071070 091670 2217.2 10 08 6898
57 246A 112764 022865 1065 08 93
57 246A 042666 110866 6267 08 33
57 246A 080768 101068 1856.2 1069 08 4345 127 65
570246A 102170 011371 2333.1 10 08 6770
572453A 071564 090964 1065 09 78 54
572453A 123064 021565 2066 09 93 46
572453A 041766 052366 1159.7 3067 09 105 36
572453A 111667 021468 1554.5 1068 09 4564 117 58
572453A 020570 051070 1999.9 6370 09 4433 132 65
572455A 122464 020765 2065 08 69 39
572455A 041966 052666 1246.8 6366 08 85 37
572455A 103166 021367 1395.8 1067 08 4647 94107
572455A 052069 090369 1854.0 1068 08 5255 124 43
572456A 121064 020665 2065 09 66 56
572456A 042766 060366 1470.6 6366 09 85 36
572456A 030267 053067 1670.6 1067 09 4229 96 29
572456A 063069 090869 1149.4 1068 09 5051 112 69
572457A 010665 020165 2065 09 35
572457A 042166 052766 6366 09 36
572457A 011067 042567 1067 09 125
572457A 121168 022769 1069 09 76
572458A 051765 061565 1069.0 2065 09 76 30
572458A 052366 071166 1426.0 6366 09 88 48
572458A 041967 063067 1625.9 1067 09 3874 100 71
572458A 071769 092469 1143.4 1070 09 4341 125 67
572459A 120164 012465 2065 09 66 54

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572459A	042766	061366	1277.3	6367
572459A	102067	011168	1526.3	1068
572459A	121169	021970	2032.6	1070
572460A	061265	071565		2065
572460A	080866	123066		1067
572460A	112268	022469	1654.0	1069
572460A	040671		2248.8	10
572461A	110964	012765	1059.3	1065
572461A	051266	062266	1475.6	1066
572461A	092368	121068	2077.3	6369
572461A	020871	041571	2667.1	10
572463A	050565	060265	1371.0	2065
572463A	052566	072566	1663.0	6367
572463A	022767	050467	1818.0	1067
572463A	050669	071169	2263.7	1069
572464A	042865	052065	1242.3	2065
572464A	051366	060166	1451.3	6366
572464A	120767	022968	1770.4	1068
572464A	020670	041870	2261.4	1070
572465A	060664	081864	505.6	1065
572465A	090265	101165	719.3	6366
572465A	071966	083166	895.9	3067
572465A	070868	092068	1201.1	1068
572466A	120164	012465		2065
572466A	042766	060366	1382.7	6366
572466A	113066	022467	1587.3	1067
572466A	031369	052169	2002.4	1069
572466A	052771		1529.8	10
572467A	121664	012865		2065
572467A	041566	051766	1363.7	3066
572467A	090968	122868	1905.2	1069
572467A	010571	031571	2494.0	10
572469A	122164	020965		2065
572469A	042966	061366		6366
572469A	021667	032767		1067
572470A	061764	083164		1064
572470A	122164	020665		2065
572470A	050266	060666	1467.1	6366
572470A	082167	120667	1703.1	1067
572470A	080669	102069	2073.1	1070
572472A	091964	121064		1064
572472A	042166	052666		6366
572472A	040368	061768		1068
572473A	120764	012465		2065
572473A	050266	062266	1533.5	6366
572473A	052867	083067	1743.8	1067
572473A	082269	102969	2116.4	1070
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572475A	050968	072368	1925.5	1068
572475A	071670	092370	2458.4	10
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572476A	042266	060666		6366
572476A	032668	060668	1892.6	1068
572476A	012870	041070	2222.9	1070
572477A	121864	020965		2065
572477A	042166	060366	1451.6	6366
572477A	090566	120366	1506.3	1067
572477A	122168	030769	1925.4	1069
572478A	030163	121063	885.1	1164
572478A	051065	061165	1358.4	2065
572478A	052466	062966	1628.1	6366
572478A	021268	042468	2040.6	1068
572478A	030370	050870	2484.0	1070
572480A	101664	121464	1010.9	1065
572480A	050365	052865	1155.8	2065
572480A	051166	062766	1399.2	6366
572480A	071268	091868	1948.4	1069
572480A	090970	112470	2415.9	10
572481A	081764	110364		1065
572481A	042965	052765		2065
572481A	051066	062066		6366
572481A	041968	070868		1068
572481A	070670	090870	2491.5	10
572482A	051965	061865	1433.6	2065
572482A	050666	060166	1696.1	6366
572482A	110967	012368	2032.5	1068
572482A	010870	031770	2515.9	1070
572483A	050465	060165	1418.0	2065
572483A	051366	062066	1663.2	6366
572483A	100266	011067	1738.4	1067
572483A	102568	011369	2219.4	1069
572483A	061571		2817.0	10
572485A	051165	061065	1406.0	2065
572485A	051866	062766	1707.3	6366

09		74	47
09	4079	102	81
09	4081	121	69
09			33
09			142
09	4995	118	92
09		68	78
09		85	40
09	4363	112	76
09	6919		
09		61	28
09		86	21
09	3696	97	67
09	4430	121	65
09		72	30
09		84	18
09	4157	102	81
09	4165	126	67
10		61	73
10		74	37
10		88	42
10	3820	110	71
08		66	54
08		88	36
08	3778	81	84
08	5240	121	67
08		66	42
08		81	32
08	4946	113	78
08	6936		
08	4143		48
08			45
08			71
08		51	56
08		65	45
08		81	34
08	5339	98	105
08		122	74
08		51	
08		35	
08		74	
08		67	47
08		85	50
08	5773	96	92
08	4674	120	67
08		81	
08		31	
08		42	
08	4081		74
08	6431		
08		38	
08		44	
08	3477		70
08	4351		72
08		51	
08		84	42
08	4060	86	88
08	4252	114	76
09		53280	
09		70	31
09		82	35
09	3896	104	72
09	4600	129	65
09	3476	66	58
09		70	25
09		82	46
09	4697	109	66
09	7262		
09		76	
09		28	
09		40	
09	3389		79
09	6940		
09		70	30
09		82	24
09	4215	101	74
09		127	39
09		70	27
09		82	37
09	3518	88	91
09	4868	112	78
09			
09		69	30
09		81	39

572495A	010567	032567	1791.8	1067	09	3438	90	80
572485A	022069	043069	2270.7	1069	09		115	70
572486A	091864	112764		1065	09			69
572486A	042765	052465		2065	09			27
572486A	052066	062766		6366	09			37
572486A	021968	043068		1068	09	3968		71
572486A	031770			1070	09	4766		
572487A	051365	061065	1309.9	2065	09		69	27
572487A	050566	062266	1530.3	6366	09		81	47
572487A	050967	072567	1777.3	1067	09	4987	93	74
572487A	091269	111969	2291.1	1070	09	4269	122	97
572490A	051465	061465	1180.0	2065	1	09		69
572490A	052666	071366	1452.3	6366	1	09		81
572490A	051867	072967	1717.5	1067	1	09	3979	93
572490A	092469	120269	2217.7	1070	1	09	5171	121
572491A	042665	060865	917.3	2065		09		69
572491A	052666	061166	1227.2	6366		09		81
572491A	080167	102367	1495.0	1068		09	4081	97
572491A	112469	021070	2718.5	1070		09	3954	124
572492A	042064	071564		1064		09		85
572492A	050765	081165		2065		09		34
572492A	051966	070666		6366		09		47
572492A	050868	071968		1068		09	3726	71
572493A	061065	071665		2065		08		36
572493A	092266	012767		6367		08	3535	112
572493A	020669	041469	1984.3	1069		08	5068	114
572494A	042964	080764		1064		08		57
572494A	052765	062565		2065		08		69
572494A	090266	102266	1517.6	6366		08		86
572494A	091268	112568	2120.1	1069		08	4992	110
572495A	061564	082764		1064		08		58
572495A	060765	070665	1310.8	2065		08		70
572495A	091966	110166	1549.4	6367		08		86
572495A	072468	092768	2082.4	1069		08	3871	108
572495A	081470	102270	2510.6	10			7715	
572496A	052465	062965		2065	11			35
572496A	090666	101166		6367	11			35
572496A	112167	021568	1855.8	1068	11	4123		74
572496A	091869	010770	2348.0	1070	11	4786		99
572497A	060765	071265		2064	08		71	35
572497A	090166	101866		6366	08		86	47
572497A	011267	041367	1422.1	1067	08	3896	89	91
572497A	030669	052269	1873.1	1069	08	5178	115	76
572499A	060765	070865	1354.8	2065	08		70	31
572499A	091366	110266	1397.4	6366	08		78	49
572499A	040467	061667	1513.4	1067	08	3517	93	72
572499A	070969	100369	1967.2	1070	08	5792	117	84
572500A	052665	062865		2065	08			32
572500A	091266	101466		6367	08			32
572500A	121366	022567	1591.2	1067	08	3221		72
572500A	051469	080169	2079.8	1069	08	5364		77
572501A	062764	103164		1065	08		58	64
572501A	052065	061765		2065	08		68	27
572501A	092666	110866		6366	08		84	43
572501A	123068	032069	1371.3	1069	08	4984	124	81
572501A	032571		2489.8	10				
572502A	093064	113064		1065	08		61	60
572502A	052465	061865		2065	08		67	24
572502A	082566	100666		6367	08		69	41
572502A	101568	122768	2089.0	1069	08	2089	105	72
572503A	061465	071465	1122.6	2066	08		69	30
572503A	091566	102266	1416.7	6367	08		84	37
572503A	061267	083167	1584.2	1067	08	5651	104	78
572503A	072969	102169	2004.4	1070	08	5461	127	83
572504A	060265	070265		2065	08		70	30
572504A	091666	102166	1518.0	6366	08		84	35
572504A	012368	040168	1838.9	1068	08	4493	112	38
572504A	120369	022270	2211.1	1070	08	4879	125	76
572505A	052665	063065		2065	08		69	34
572505A	083066	101366	1521.8	6367	08		82	44
572505A	011268	040568	1847.8	1068	08	4380	100	83
572505A	121069	022270	2786.3	1070	08	4140	124	72
572506A	053065	063065		2065	08		70	30
572506A	090866	102666	1717.4	6367	08		85	48
572506A	050468	072468	2058.2	1068	08	3895	105	80
572506A	060570			1070	08			
572508B	071965	090265	191.5	2066	12		69	43
572508B	012867	050367	1356.0	1067	12		76	96
572508B	090269	011970	2009.8	1069	12	4865	120	137
572509B	102764	123064	393.1	1065	13		76	64
572509B	030866	041566	1308.1	6366	13		93	37
572509B	010268	033168	1799.1	1068	14	4228	114	89
572509B	021170	050570	2389.5	1070	14	5674	141	84
572510B	082365	101265	1408.1	2066	12		82	49
572510B	051368	080168	1959.9	1068	12		116	78
572510B	083170	112370	2404.1	10		8288		
572512B	071265	090265	352.9	2065	13		78	50

572512B	011267	042767	1260.2	1067
572512B	061669	092369	1832.4	1069
572514B	102865	122365	1082.7	6266
572514B	120566	030467	1363.1	1067
572514B	040269	061869	1933.1	1069
572515B	101264	123064	840.1	1065
572515B	040665	051765	940.0	2065
572515B	031566	042966	1112.6	6366
572515B	032668	062668	1460.6	1068
572515B	071470	092570	2347.6	10
572517B	111864	012865		1065
572517B	060265	071265	755.2	2065
572517B	082266	102166	1051.4	6367
572517B	061868	091368	1435.1	1069
572517B	100170	122670	1307.1	10
572518B	042365	061865	847.0	2065
572518B	051766	090866	1027.5	6367
572518B	073166	100868	1329.3	1069
572518B	111870	021671	2111.8	10
572520B	051265	063065	1220.1	2065
572520B	050466	070166	1417.1	6366
572520B	103166	031667	196.5	1067
572520B	020469	043069	1951.5	1069
572520B	040271		2281.8	10
572521B	012066	040466	410.9	2066
572521B	100468	011069	126.1	1069
572521B	012270		1418.1	1070
572522B	052465	070465	861.0	2065
572522B	083066	110166	169.7	6367
572522B	040567	063067	1309.2	1067
572522B	041669	071769	1693.0	1069
572522B	060371		2080.2	10
572524B	072364	093064	743.1	1065
572524B	061565	080665	1015.0	2065
572524B	042166	112166	1340.8	6367
572524B	021268	051668	1361.2	1068
572524B	042870			1070
572526B	060364	083164		1064
572526B	042965	062465		6265
572526B	050666	071566		3066
572527B	043064	070664		1064
572527B	121464	022365		6165
572527B	041166	052366	1285.7	6366
572527B	113068	022769	186.9	1069
572527B	031771		278.3	10
572528B	110364	022865		1065
572528B	041866	061366	319.4	6366
572528B	111368	020769	1314.4	1068
572528B	010471	032371	1704.6	10
572530B	021563	122063	586.0	1163
572530B	070665	103065	775.3	1066
572530B	032167	071967	1480.7	1067
572530B	120169	022370	1561.6	1070
572531B	123064	022865		6265
572532B	071665	090765	741.8	6266
572532B	063066	112968	1747.3	1069
572533B	092264	113064	698.0	1065
572533B	083065	101265	1357.0	2066
572533B	080266	092366	1739.9	6367
572533B	062066	103168	1545.4	1069
572533B	101470	010671	2140.8	10
572535B	040364	072464	51.2	2064
572535B	072265	100465	134.5	2066
572535B	062766	081066	1389.7	6366
572535B	093067	010268	1700.3	1068
572535B	102069	011970	226.5	1070
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572537B	103070	020571	1884.8	10
572538B	070165	080365	1003.7	6266
572538B	092366	011367	179.1	1067
572538B	030369	052969	1809.1	1069
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572539B	080665	092865	165.3	6266
572539B	042067	070567	151.0	1067
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572541B	081965	100865	1089.5	6266
572541B	121467	032368	1625.0	1068
572541B	051570			1070
572543B	060965	090365		6266
572543B	101367	021568		1068
572543B	040670			1070

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58 766A	092368	112368	1748.1	1069
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58 768A	020468	041968		1068
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58 773A	121167	022768		1068
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58 774A	031467	053167	1710.0	1067
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58 779A	012070	032670	2114.6	1070
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58 780A	122067	031468	1507.5	1068
58 780A	052170			1070
58 781A	091765	101865	1043.5	2066
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58 784A	072265	082685	1126.1	2066		10	69 34
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58 785A	072269	101069	1553.2	1070		02	4965 117 78
58 786A	032765	060965	738.0	2065	11	10	
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58 786A	102869	011570	1756.1	1070		10	4628 120 77
58 787A	080565	091165		2066		10	35
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58 788A	100864	122664	784.6	1065		10	60 78
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58 790A	070764	091864	743.1	1065		10	40
58 790A	080965	091165	1033.5	2066		10	58 71
58 790A	070866	082466	1794.2	6387		10	69 32
58 790A	053168	081268	1639.5	1069		10	81 46
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58 791A	072065	082185	1280.5	2066			
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58 791A	072167	101167	1687.8	1068		10	69 31
58 791A	012270	032770	2174.0	1070	1111	10	81 34
58 792A	040164	070764	854.7	1064		10	4611 94 80
58 792A	022565	032585	1096.0	2065		10	3959 124 65
58 792A	060768	072066	1524.5	6366		05	54 67
58 792A	040768	061968	1937.8	1068		05	64 30
58 792A	051170			1070		05	81 43
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58 793A	070766	081766	1362.5	6367		10	
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58 797A	072666	090686	1481.1	6367		10	4230 100 72
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58 797A	080069	102169	2754.9	1070	11	03	81 41
58 798A	041365	101265		6166		03	3396 86 90
58 900B	070164	080364	658.8	1065		03	4738 117 73
58 900B	101265	120965	912.7	6266		03	29
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58 904B	111965	011066	1032.8	6266		12	6703 85105
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59 001A	051864	073064		1084		12	6204 86124
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59 002A	062464	090964	594.1	1064		12	72
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590002A	111770	012871	2434.5	10		04	72 42
59 003A	121465	012686	1528.7	2066		04	3812 103 68
59 003A	013167	041367	1817.4	1067			
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59 004A	121465	011286	1411.4	8266		04	73 42
59 004A	082268	102588	2634.2	1069		04	3685 85 73
590004A	121470	021971	2814.6	10		04	4584 114 67
59 005A	112265	010366	1443.3	6266		12	73 42
59 005A	051567	081867	1838.7	1087		12	4113 105 63
59 005A	081469	103169	2334.6	1070			
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59 006A	100969	121989	2055.6	1070		04	4504 90 93
59 007A	071965	081865	1216.6	2066		04	4367 117 77
59 007A	081966	100466	1540.7	6367		04	70 47
59 007A	011869	032869	2014.4	1069	11	04	4004 80 94
59 008A	080265	090985	1177.0	2066		04	5479 117 70
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59 008A	010669	031869	1917.9	1069	11	03	79 45
59 009A	020165	030965	1030.1	2065		03	4693 108 70
59 009A	031866	041386	1278.8	6365		03	68 37
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59 010A	100764	120464	943.8	1064
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59 010A	041068	062168	1875.6	1068
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59 011A	071966	100766	13.5.1	3067
59 011A	051768	080968	174.1	1068
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59 023A	100264	120864	114.9	1065
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59 026A	012370	040270	1736.6	1070
59 027A	071265	081165	1078.4	1066
59 027A	070466	081666	1342.6	6367
59 027A	091868	112768	1958.1	1069
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59 028A	091164	112764	919.7	1065
59 028A	032965	042365	1031.1	2065
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59 072A	041169	061869	190.1	1069	15	108 68
59 074A	011363	102663	597.0	1163	15	30 54
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59 039A	092865	110565	1221.2	6266	01	62	39
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59 039A	070769	091269	2233.9	1070	01 4510	108	
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59 101A	102469	010670	2358.2	1070	01 4610	112	74
59 102A	101965	112465	1244.4	6266	01	62	36
59 102A	022368	050968	1817.4	1068	01 3388	90	75
59 102A	031970	052270	2413.3	1070	01 4336	115	63
59 103A	081265	091565	1055.3	6266	13	60	34
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59 103A	021170	042070	2073.4	1070	13 4663	114	69
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59 104A	070868	093068	1495.2	1069	04		96.83
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59 105A	052069	072469	2275.2	1069	04		65
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59 106A	020368	041568	1786.4	1068	15 4320	90	70
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59 108A	060370		2550.9	1070	07	117	
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59 109A	010566	020466	1461.5	6266	10	65	30
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59 127A	011265	022365	1121.3	2065	05	52	42
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59 140A	012467	032867	1438.1	1067		
59 140A	102269	122969	2181.7	1070		
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59 141A	003167	120167	1772.1	1067		
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59 147A	022166	032266	1303.1	6366		
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59 148A	031666	041966		6366		
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59 149B	103164	012865	691.3	1065		
59 149B	110165	122865	936.1	6266		
59 149B	090866	120866	1164.2	1067		
59 149B	011469	041169	1736.8	1069		
59 149B	012971	042871	2308.1	10		
59 151B	021065	031665		2065		
59 151B	012660	031466	1508.2	6366		
59 151B	030667	061667	1759.2	1067		
59 151B	050269	080969	2325.1	1069	1	
59 152B	020165	031765		2065		
59 152B	022166	041266	1412.6	6366		
59 152B	041268	072468	2015.1	1068		
05 3137			80	81		
05 5365			106	67		
05			54	40		
05 4984			69	35		
05			82	87		
05 5381			108	70		
13			46	59		
13			62	41		
13 4306			96	72		
7076						
13			61	40		
13 5039			110	66		
6708						
13			52	32		
13			64	38		
13 3862			92	83		
05			54	16		
05			67	52		
05 4292			77	83		
05 6169			101	76		
05			53	27		
05			68	50		
05 4776			77	108		
05 4276			102	75		
05			33			
05			41			
05 3017			75			
05			46	57		
05			53	33		
05			66	52		
05 4458			91	79		
6971						
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03			52	26		
03			67	45		
03 5623			93	81		
6351						
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05			67	46		
05 5954			82	88		
05 4033			112	38		
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13			64	32		
13 3850			76	71		
13			103	69		
13			50	36		
13			62	34		
13 3124			73	63		
13 5348			106	68		
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07 2955			72	76		
07 4866			100	68		
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03 4501			83			
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07 5316			114	109		
07			32			
07			34			
07 3136			89			
02			52	90		
02			66	59		
02			76	91		
02 5524			104	87		
07			55	34		
07			66	45		
07			80	102		
07 5861			106	98		
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07			66	50		
07 4839			92	103		

590152B	072870	101470	2579.7	10	8500	
59 153B	032965	050365	974.2	2065	10	56 36
59 153B	032366	050666	1258.8	6366	10	68 44
59 153B	122966	080867	1443.5	1067	10	79221
59 153B	121569	031370	2253.7	1070	10 5251	114 88
59 155B	092765	111265	976.5	6266	01	61 47
59 155B	070367	101367	1356.9	1068	01 5620	82102
59 155B	080469	102469	1969.1	1070	01 5157	108 81
59 157B	102064	010865	780.7	1065	05	53 48
59 157B	030165	040665	847.8	2065	05	55 37
59 157B	060766	081166	1260.5	6366	05	65 65
59 157B	011768	043068	1613.0	1068	05 5700	89 72
59 157B	041670			1070	05	115
59 158B	022365	040565	956.1	2065	05	54 43
59 158B	060166	072666	1401.0	6366	05	81 57
59 158B	060667	100367	1700.0	1067	05	93119
59 158B	110369	020270	2200.0	1070	05 5250	109 92
59 159B	082365	101265		6266	12	50
59 159B	031368	062068		1068	12 5409	78
590159B	062970	091870	2263.2	10		
59 160B	081765	011764	679.3	1164	01	34153
59 160B	02265	110965	1121.9	6266	01	58 48
59 160B	113067	030668	1679.0	1068	01 4788	85 97
59 160B	020370	042170	2310.9	1070	01 5281	112 77
59 161B	121765	021466	1204.3	6266	15	61 69
59 161B	040467	083067	1569.6	1067	15	79147
59 161B	071569	102169	2132.1	1070	15 5388	104 98
59 162B	121564	022865	1021.1	1065	13	49 44
59 162B	011366	022566	1279.7	6366	13	62 43
59 162B	110468	011769	2072.5	1069	13 4447	96 74
59 163B	070765	082065	1005.2	6266	12	57 43
59 163B	080266	021767	1318.0	1067	12	69120
59 163B	031769	061369	1885.3	1067	12 5541	101 87
59 164B	082565	101265	882.3	1066	12	56 48
59 164B	022867	060567	1163.6	1067	12	74 97
59 164B	091669	121669	1742.0	1070	12 5431	104 91
59 165B	061065	072865		2065	12	54 49
59 165B	112866	030767	605.8	1067	12	70101
59 165B	081869	112869	1053.6	1070	12 6015	104102

\*END

/\* PLACE TFG DATA BEFORE THIS CARD

//TPR,TU22 DU DISP>[OLD,KFEP],VOL>SER>+F5,UNIT>T+F5

//TPR,TPR1N DU \*.SPACE>[TRK,[1,1]]

T/P TU13 12000802080

T/P TU14 12000802080

T/P TU22 12000802080

T/P TU23 12001202120

/\* PLACE T/P CONTROL CARDS BEFORE THIS CARD

#### 6.4.3 IRAN COPY ACCEPTABLE AIRCRAFT

```
//C9897J JUH 01: G WANG :;PRTY>02,TPRUN>HOLD
//C9897 EXEC P9655L TIME>01,ACCT>D35323007
//CHG,TU12 DU DISP>[PASS],UNIT>[T+F1,1,DEFER],OSN>+A,9895422, CT12 1
// VOL>SER>[+F1,A+F1,B+F1,C+F1,D+F1,E+F1,F+F1,G+F1,H+F1, CT12 2
// 1+F1,J+F1,K+F1,L+F1,M+F1,N+F1,O+F1,P+F1,Q+F1,R+F1,S+F1] T12 3
//CHG,TU22 DU DISP>[PASS],UNIT>[T+F5,1,DEFER],OSN>+E,9895422, CT22 1
// VOL>SER>[+F5,A+F5,B+F5,C+F5,D+F5,E+F5,F+F5,G+F5,H+F5, CT22 2
// 1+F5,J+F5,K+F5,L+F5,M+F5,N+F5,O+F5,P+F5,Q+F5,R+F5,S+F5] T22 3
//CHG,INPUT DU *.SPACE>[CYL,[1,1]] 1440 CDS
00000 COMBIN* COMPIL G. WANG. C98970
01040 DATE-WRITEIN: 27 DEC 71. C98970
01050 REMARKS. IRAN COPY ACCEPTABLE AIRCRAFT. C98970
02000 ENVIRONMENT DIVISION. C98970
02010 CONFIGURATION SECTION. C98970
02020 SOURCE-COMPUTER. IBM-360. C98970
02030 OBJECT-COMPUTER. IBM-360. C98970
02100 INPUT-OUTPUT SECTION. C98970
02110 FILE-CONTROL. C98970
02120 SELECT INFILE ASSIGN TO UT-S-TU12 C98970
02130 RESERVE 1 ALTERNATE AREA. C98970
02140 SELECT OUTFILE ASSIGN TO UT-S-TU22 C98970
02150 RESERVE 1 ALTERNATE AREA. C98970
02160 SELECT ACCEP-FILE ASSIGN TO DA-S-DT01 C98970
02170 RESERVE 1 ALTERNATE AREA. C98970
10000 DATA DIVISION. C98970
10010 FILE SECTION. C98970
10020 FD INFILE C98970
10030 RECORDING MODE IS F C98970
10040 BLOCK CONTAINS 30 RECORDS C98970
10050 RECORD CONTAINS 80 CHARACTERS C98970
```

[illegible]



/\* PLACE COBOL SOURCE BEFORE THIS CARD  
//LMO,IFGIN DU C,SPACE>[CYL,[1,1]]  
TFG DTU1 11 0207080

1440 CDS

150  
57000231  
57000232  
57000235  
57000236  
57000237  
57000243  
57000244  
57002455  
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 59000157  
 59000164

\*END  
 /\* PLACE TFG DATA BEFORE THIS CARD  
 //TPR.TU12 DU DISP>[OLD,KEEP],VOL>SER>+F1,UNIT>T+F1  
 //TPR.TU22 DU DISP>[OLD,KEEP],VOL>SER>+F5,UNIT>T+F5  
 //TPR.TPR1N DD ,SPACE>[TRK,(1,1)]  
 T/P TU22 10500802080

T12  
 T22

T/P OT01 10200802080  
 /\* PLACE T/P CONTROL CARDS BEFORE THIS CARD

## 6.5 DATA BANK GENERATION PROGRAMS

### 6.5.1 SORT ACCEPTABLE WUC

```
//T9897A JOB 01: G. WANG : ,PRTY>02, TYPRUN>HOLD
//C9897S EXEC C96UIN, TIME>01, ACCT>035323007
//CHG, TU22 DU DISP>[ ,KEEP], UNIT>[T+F5,1,DEFER], DSN>*E,9897401, CT22 1
// VOL>SER>[+F5,A+F5,B+F5,C+F5,D+F5,E+F5,F+F5,G+F5,H+F5, CT22 2
// I+F5,J+F5,K+F5,L+F5,M+F5,N+F5,O+F5,P+F5,Q+F5,R+F5,S+F5] T22 3
//CHG, TFGIN DU *,SPACE>[TRK,(5,5)] 360 CDS
TFG TU22 11 0502020
11U00
11C00
11CA1
11CAA
11CB1
11CBA
11CC1
11CCA
11C01
11CDA
11CE1
11CEA
11CF1
11CFA
11CG1
11CGA
11CH1
11CJ1
11U0U
11UA0
11UAA
11UAB
11UAC
11UAD
11UAE
11UAF
11UJU
11UBA
11UBB
11UBC
11UBD
11UBE
11UC0
11UCA
11UCB
11UCC
11UCU
11UCE
11UCF
11UCG
11UCH
11UCJ
11UCK
11UD0
11UDA
11UDB
11UDC
11UDD
11UDE
11UDG
11UDF
11UDH
11UE0
11UEA
11UEB
11UEC
11UED
11UEE
11UEF
11UEG
11UEH
11UF0
11UFA
11UFB
11UFC
11UFD
11UFE
11UFF
11UFG
11UFH
11UFJ
11UG0
11DGA
```

11UGB  
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11UGG  
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11OHE  
11EAO  
11EAA  
11EAB  
11EAC  
11EAD  
11EAE  
11EAF  
11EAG  
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11EBG  
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GENERAL DYNAMICS SAN DIEGO CALIF CONVAIR AEROSPACE DIV

F/G 1/5

F-106 SCHEDULED MAINTENANCE STUDY. USER'S MANUAL, (U)

SEP 72 G WANG, R S GROTE, J R COOPER

F41608-71-D-1383

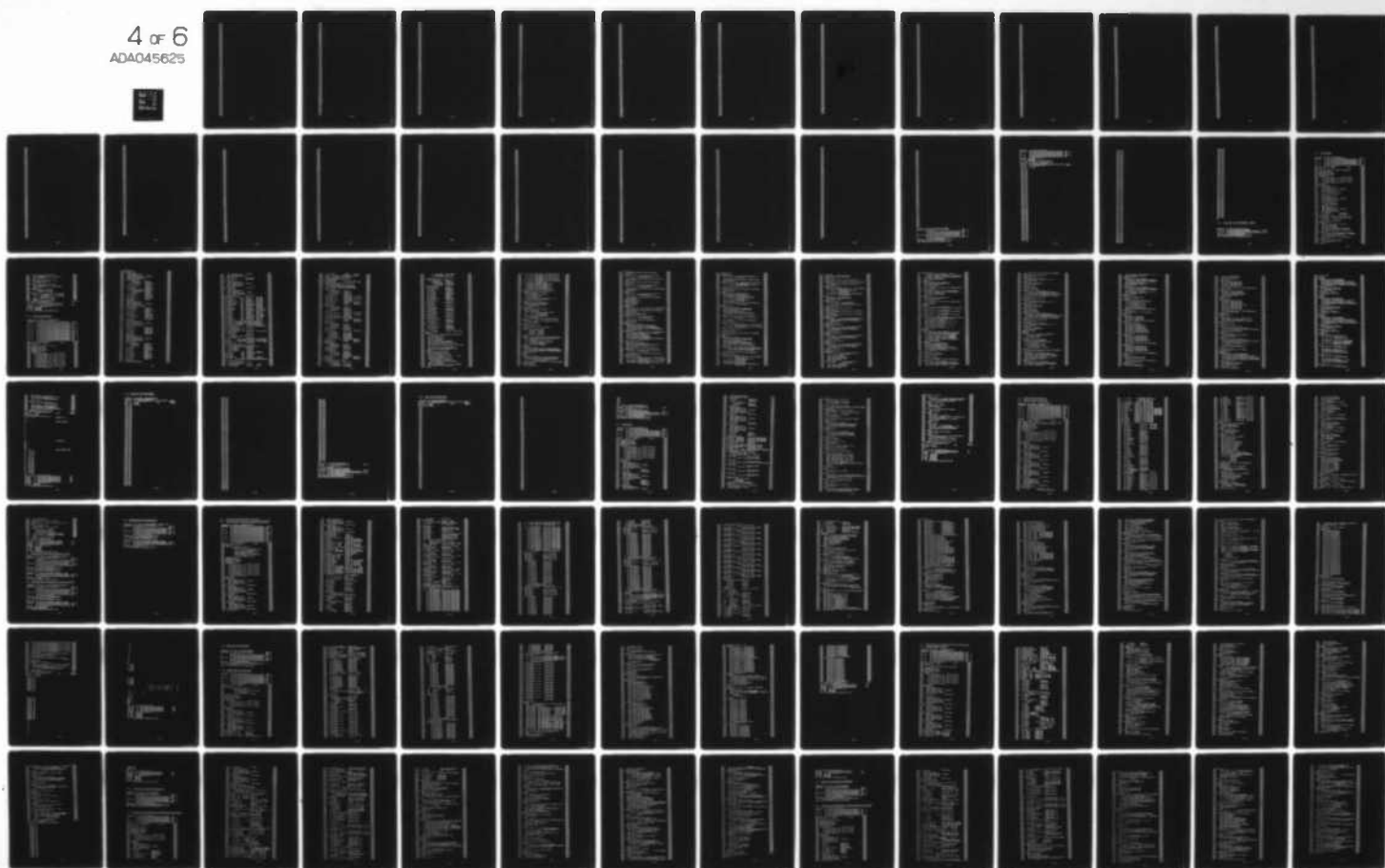
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75GM1  
75H00  
75HA1

```

75HB1
75HBA
75HBB
75HBC
75HBD
75HBE
75J00
75JA1
75JB1
75JRA
75JBB
75JBC
75JBD
75JC1
75JCA
75JCB
75JCC
75JCD
75JD1
75JE1
75JF1
75JG1
75JH1
75K00
75KAA
75KAB
75KAC
75KAD
75KAE
75KAF
75KAG
75KB1
75KBA
75KBB
75KBC
75KC1
93A00
93AA1
93AB1
93AC1
93AD1
93AE1
93AEA
93AF1
93AG1
93AH1
93AJ1
93AK1
93AL1
93AM1
93AN1
93AP1
93AQ1
93AR1
93AS1
93AT1
93AU1
93AV1
97AA1
97AC1
97AE1
97AF1
97AH1
97AJ1
97AM1
97AN1
97AP1
97AQ1
97AU1
97BC1
97BD1
*END
/*
//C98970 EXEC P9642N,W>19%,TIME>01,ACCT>D35323007
//CHG.SORTIN DU DISP>[ KEEP],UNIT>[ T+FS,1,DEFER], CT22 1
// DSN>+E,9897401, CT22 2
// VOL>SER>[ +FS,A+FS,R+FS,C+FS,D+FS,E+FS,F+FS,G+FS,H+FS, CT22 3
// I+FS,J+FS,K+FS,L+FS,M+FS,N+FS,O+FS,P+FS,Q+FS,R+FS,S+FS],CT22 4
// DCB>[LRECL>1020,HLKSIZE>1000],LABEL>[X,NSL,RETPD>099]
//CHG.SORTOUT DU DISP>[ KEEP],UNIT>[ T+F1,1,DEFER],DSN>+A,9897402, CT12 1
// VOL>SER>[ +F1,A+F1,B+F1,C+F1,D+F1,E+F1,F+F1,G+F1,H+F1, CT12 2
// I+F1,J+F1,K+F1,L+F1,M+F1,N+F1,O+F1,P+F1,Q+F1,R+F1,S+F1],CT12 3
// DCB>[LRECL>1020,BLKSIZE>1000]
//CHG.SYSIN DU *DCB>HLKSIZE>0080,SPACE>[TRK,(1,1)]
SORT FIELDS>[001,005,CH,~],SIZE>E0003000
MODS E15>[E15,008,SORTL1],N),E18>[E18,024,SORTL18,N)

```

```

/*
//C9897P EXEC C9603N,TIME>01,ACCT>D35323007
//CHG,TU12 DD DISP>X,KEEP,UNIT>[T+F1,1,DEFER],DSN>+A,9897402, CT12 1
// VOL>SER>[+F',A+F1,B+F1,C+F1,D+F1,E+F1,F+F1,G+F1,H+F1, CT12 2
// 1+F1,J+F1,K+F1,L+F1,M+F1,N+F1,O+F1,P+F1,Q+F1,R+F1,S+F1] T12 3
//CHG,TU22 DD DISP>X,KEEP,UNIT>[T+F5,1,DEFER],DSN>+E,9897401, CT22 1
// VOL>SER>[+FJ,A+F5,B+F5,C+F5,D+F5,E+F5,F+F5,G+F5,H+F5, CT22 2
// 1+F5,J+F5,K+F5,L+F5,M+F5,N+F5,O+F5,P+F5,Q+F5,R+F5,S+F5] T22 3
//CHG,TPRIM DD *.SPACE>[TRK,[1,1]]
T/P TU12 10500202020
T/P TU22 10500202020
/* PLACE T/P CONTROL CARDS BEFORE THIS CARD
//T9897N JOB 01:1 0 WANG 1,PRTY>02,TPRUN>HOLD
//C9897W EXEC C9601N,TIME>03,ACCT>D35323007
//CHG,TU22 DD DSN>+P,9897401,DISP>X,PASS],SPACE>[CYL,[001,001]] D22-OUT
//CHG,TF61N DD *.SPACE>[CYL,[1,1]] 1440 CDS
TFG TU22 11 0202080
74AJ1 74AK1
74AK1 74AL1
74AKA 74ALA
74AM1 74AN1
74AN1 74AP1
74ANB 74APA
74ANC 74APB
74AND 74APC
74ANG 74APF
74ANH 74APG
74ANJ 74APH
74ANK 74APJ
74ANL 74APK
74ANM 74APL
74ANN 74APM
74ANQ 74APP
74ANS 74APR
74ANT 74APS
74ANU 74APT
74ANV 74APU
74ANW 74APV
74ANX 74APW
74ANY 74APX
74ANZ 74APY
74AN2 74APZ
74AN3 74AP2
74AN4 74AP3
74AN5 74AP4
74AN6 74AP5
74AN7 74AP6
74AN8 74AP7
74AP1 74AQ1
74AQ1 74AR1
74AQB 74ARB
74AQC 74ANC
74AR1 74AS1
74AS1 74AT1
74ASA 74ATA
74AT1 74AU1
74BC1 74BD1
74BCA 74BDA
74BD1 74BC1
74BD1 74BD1
74BE1 74BE1
74BH1 74BF1
74BJ1 74BG1
74BK1 74BH1
74BL1 74BJ1
74BM1 74BK1
74BMA 74BKA
74BMB 74BKB
74BN1 74BL1
74BP1 74BM1
74BPA 74BMA
74BPB 74BMB
74BQ1 74BN1
74BK1 74BP1
74BT1 74BU1
74BU1 74BH1
74BUA 74BKA
74BUB 74BHB
74BV1 74BS1
74BW1 74BT1
74BX1 74BU1
74CH1 74BV1
74CN1 74BW1
74BZ1 74BX1
74BZA 74BXA
74CP1 74BY1

```

74CA1 74UZ1  
 74CAA 74UZA  
 74CQ1 74CA1  
 74CQA 74CAA  
 74CQB 74CAB  
 74CQC 74CAC  
 74CQD 74CAD  
 74CQE 74CAE  
 74CR1 74CC1  
 74CRA 74CCA  
 74CRB 74CCB  
 74CRC 74CCC  
 74CRD 74CCD  
 74CRE 74CCE  
 74CRF 74CCF  
 74CRG 74CCG  
 74CRH 74CCH  
 74CRJ 74CCJ  
 74CRK 74CLK  
 74CRL 74CCL  
 74CC1 74CU1  
 74CS1 74CF1  
 74CSA 74CFA  
 74CSB 74CFB  
 74CE1 74CG1  
 74CF1 74CH1  
 74CFA 74CHA  
 74CT1 74CJ1  
 74CTA 74CJA  
 74CTB 74CJB  
 74CTC 74CJC  
 74CTD 74CJD  
 74CTE 74CJE  
 74CG1 74DB1  
 74CH1 74DC1  
 74CHA 74DCA  
 74CHB 74DCB  
 74CHC 74DCC  
 74CHE 74DCD  
 74CHF 74DCE  
 74CK1 74DU1  
 74E00 74F00  
 74EB1 74FA0  
 74FF1 74FB1  
 74FE1 74FC1  
 74FEA 74FLA  
 74FEB 74FLB  
 74FEC 74FLC  
 74FED 74FLD  
 74FEE 74FCE  
 74FEF 74FLF  
 74FC1 74FU1  
 74FCA 74FLA  
 74FCB 74FUB  
 74FCC 74FUC  
 74FCD 74FUD  
 74FCE 74FUE  
 74FCF 74FUF  
 74FCG 74FUG  
 74FCH 74FUH  
 74FCJ 74FUJ  
 74FCK 74FUK  
 74FCL 74FUL  
 74FCM 74FUM  
 74FCN 74FUN  
 74FCP 74FUP  
 74FCQ 74FUQ  
 74FCR 74FUR  
 74FCS 74FUS  
 74FCT 74FUT  
 74FCU 74FUU  
 74FCV 74FUV  
 74FCW 74FUW  
 74FCX 74FUX  
 74FCY 74FUY  
 74FCZ 74FUZ  
 74FC2 74FU2  
 74FC3 74FU3  
 74FC4 74FU4  
 74FC5 74FU5  
 74FC6 74FU6  
 74FC7 74FU7  
 74FC8 74FU8  
 74FC9 74FU9  
 74FDA 74FLA  
 74FDB 74FEB  
 74FBI 74FF1

74FBA 74FFA  
 74FBB 74FFB  
 74FBC 74FFC  
 74FBD 74FFD  
 74FBE 74FFE  
 74FBF 74FFF  
 74FBG 74FFG  
 74FBH 74FFH  
 74FBJ 74FFJ  
 74FBK 74FFK  
 74FBL 74FFL  
 74FBM 74FFM  
 74EV1 74FG1  
 74EW1 74FH1  
 74EX1 74FJ1  
 74EU1 74FK1  
 74KM1 74KB1  
 74KB1 74KC1  
 74KBB 74KCB  
 74KCI 74KU1  
 74KDI 74KE1  
 74KDB 74KEB  
 74KDC 74KEC  
 74KE1 74KF1  
 74KEB 74KFB  
 74KF1 74KG1  
 74KFA 74KGA  
 74KFB 74KGB  
 74KFC 74KGC  
 74KFD 74KGD  
 74KFE 74KGE  
 74KFF 74KGF  
 74KFG 74KGG  
 74KFH 74KGH  
 74KFJ 74KGJ  
 74KFK 74K GK  
 74KFL 74KGL  
 74KG1 74KH1  
 74KMA 74KJA  
 74KPI 74KK1  
 74KQ1 74KL1  
 74KRI 74KM1  
 74KSI 74KN1  
 74KTI 74KP1  
 74KU1 74KU1  
 74CEA 74CGA  
 74KV1 74KH1  
 74G00 74PU0  
 74GA1 74PA1  
 74GB1 74PB1  
 74GD1 74PC1  
 74GF1 74PD1  
 74GF1 74PE1  
 74GG1 74PF1  
 74GGA 74PFA  
 74GH1 74PG1  
 74GJ1 74PH1  
 74GK1 74PJ1  
 74GL1 74PK1  
 74GM1 74PL1  
 74GP1 74PM1  
 74GQ1 74PN1  
 74GR1 74PP1  
 74GN1 74QA1  
 74GNA 74QAA  
 \*END

## 6.5.2 SORT WUC FOR CONVERSION - MERGE

```

/*
//C9897N EXEC P9622N,W010,TIME02,ACCT035323007
//CH0.SORTIN DD DSN>P.9897401,DISP>(OLD,DELETE), CO22/23 1
// DCB>(LRECL>3000,BLKSIZE>1600),LABEL>(MSL,RETPD>000)
//CH0.SORTOUT DD DSN>P.9897403,DISP>(PASS),SPACE>(CYL,(001,001)), CO12/13 1
// DCB>(LRECL>0080,BLKSIZE>1600)
//CH0.SYSIN DD *,DCB>(BLKSIZE>0080,SPACE>(TRK,(1,1))
SORT FIELDS>(002,005,CH,1),SIZE>(0000400
MOOS E15>(E15,008,SORTL'0,N),E10>(E10,024,SORTL10,N)
/*

```

### 6.5.3 WUC MERGE

```

//C98970 EXEC P9655L,TIME>01,ACCT>035323007
//CHG,TU12 DU DSN>P.9897403,DISP>[OLD,PASS] DI2-IN
//CHG,TU14 DU DISP>[PASS],UNIT>[T+F3,I,DEFER],DSN>C.9897402, CT14 1
// VOL>SER>[I+3,A+F3,B+F3,C+F3,D+F3,E+F3,F+F3,G+F3,H+F3, CT14 2
// I+F3,J+F3,K+F3,L+F3,M+F3,N+F3,O+F3,P+F3,Q+F3,R+F3,S+F3] T14 3
//CHG,TU24 DU DISP>[PASS],UNIT>[T+F7,I,DEFER],DSN>G.9897404, CT24 1
// VOL>SER>[I+7,A+F7,B+F7,C+F7,D+F7,E+F7,F+F7,G+F7,H+F7, CT24 2
// I+F7,J+F7,K+F7,L+F7,M+F7,N+F7,O+F7,P+F7,Q+F7,R+F7,S+F7] T24 3
//CHG,INPUT DD *,SPACE>[CYL,[1,I]] I440 CDS
00000 COMBINE COMPILE G. WANG C98970
01040 DATE-WRITTEN. 17 MAY 72. C98970
01050 REMARKS. C98970
01060 MODIFY WUC FILE TO CONSIDER WUC CONVERSION. C98970
02000 ENVIRONMENT DIVISION. C98970
02010 CONFIGURATION SECTION. C98970
02020 SOURCE-COMPUTER. IBM-360. C98970
02030 OBJECT-COMPUTER. IBM-360. C98970
02100 INPUT-OUTPUT SECTION. C98970
02110 FILE-CONTROL. C98970
02120 SELECT IN-FILE-65-110 ASSIGN TO UT-S-TU14 C98970
02130 RESERVE 1 ALTERNATE AREA. C98970
02180 SELECT IN-FILE-66-1 ASSIGN TO UT-S-TU12 C98970
02190 RESERVE 1 ALTERNATE AREA. C98970
02200 SELECT IN-FILE-WUC ASSIGN TO UT-S-TU24 C98970
02210 RESERVE 1 ALTERNATE AREA. C98970
10000 DATA DIVISION. C98970
10010 FILE SECTION. C98970
10100 FD IN-FILE-65-110 C98970
10120 RECORDING MODE IS F C98970
10130 BLOCK CONTAINS 50 RECORDS C98970
10140 RECORD CONTAINS 20 CHARACTERS C98970
10150 LABEL RECORDS ARE OMITTED C98970
10160 DATA RECORDS ARE IN-REC-65-110. C98970
10170 01 IN-REC-65-110 SYNC. C98970
10180 02 OLD-REC-WUC PICTURE X(5). C98970
10190 02 FILLER PICTURE X(15). C98970
13100 FD IN-FILE-66-1 C98970
13110 RECORDING MODE IS F C98970
13120 BLOCK CONTAINS 20 RECORDS C98970
13130 RECORD CONTAINS 80 CHARACTERS C98970
13140 LABEL RECORDS ARE OMITTED C98970
13150 DATA RECORDS ARE IN-REC-66-1. C98970
13160 01 IN-REC-66-1 SYNC. C98970
13170 02 FILLER PICTURE X. C98970
13180 02 TAB2-WUC PICTURE X(5). C98970
13190 02 FILLER PICTURE X(74). C98970
14100 FD IN-FILE-WUC C98970
14120 RECORDING MODE IS F C98970
14130 BLOCK CONTAINS 50 RECORDS C98970
14140 RECORD CONTAINS 20 CHARACTERS C98970
14150 LABEL RECORDS ARE OMITTED C98970
14160 DATA RECORDS ARE REC-IN-WUC. C98970
14170 01 REC-IN-WUC SYNC. C98970
14180 02 IN-REC-WUC PICTURE XXXXX, C98970
14190 02 FILLER PICTURE X(15). C98970
30000 WORKING-STORAGE SECTION. C98970
30400 01 NO-WUC-PROC PICTURE 9999 VALUE ZERO SYNC. C98970
30420 01 NO-TAB2-PROC PICTURE 9999 VALUE ZERO SYNC. C98970
30440 01 TABLE4-WUC SYNC. C98970
30500 02 TABLE-WUC PICTURE X(5). C98970
30600 02 FILLER PICTURE X(15). C98970
50000 PROCEDURE DIVISION. C98970
50010 OPEN-FILES. C98970
50020 OPEN INPUT IN-FILE-65-110, IN-FILE-66-1. C98970
50030 OPEN OUTPUT IN-FILE-WUC. C98970
50040 MOVE ZERO TO NO-WUC-PROC. C98970
50050 MOVE ZERO TO NO-TAB2-PROC. C98970
50060 READ IN-FILE-65-110 AT END GO TO CLOSE-FILES. C98970
50070 READ IN-FILE-66-1 AT END GO TO CLOSE-FILES. C98970
50080 MOVE TAB2-WUC TO TABLE-WUC. C98970
50090 COMPARE-FILES. C98970
50100 IF OLD-REC-WUC LESS THAN TABLE-WUC GO TO TU14-LESS. C98970
50110 IF OLD-REC-WUC NOT EQUAL TO TABLE-WUC GO TO TU12-LESS. C98970
50120 WRITE REC-IN-WUC FROM IN-REC-65-110. C98970
50130 ADD 1 TO NO-WUC-PROC. C98970
50140 READ IN-FILE-65-110 AT END GO TO CLOSE-FILES. C98970
50150 GO TO R-TU12. C98970
50160 TU12-LESS. C98970
50170 WRITE REC-IN-WUC FROM TABLE4-WUC. C98970
50180 ADD 1 TO NO-TAB2-PROC. C98970
50190 GO TO R-TU12. C98970
50200 TU14-LESS. C98970

```



```

S0210      WRITE REC-IN-WUC FROM IN-REC-65-110,
S0220      ADD 1 TO NO-WUC-PROC,
S0230      READ IN-FILE-65-110 AT END GO TO CLOSE-FILES,
S0240      GO TO COMPARE-FILES,
S0250      R-TU12,
S0260      READ IN-FILE-66-1 AT END GO TO R-TU14,
S0270      MOVE TAB2=WUC TO TAB1=WUC,
S0280      GO TO COMPARE-FILES,
S0290      R-TU14,
S0300      WRITE REC-IN-WUC FROM IN-REC-65-110,
S0305      ADD 1 TO NO-WUC-PROC,
S0310      READ IN-FILE-65-110 AT END GO TO CLOSE-FILES,
S0320      GO TO R-TU14,
S0720      CLOSE-FILES,
S0730      CLOSE IN-FILE-65-110 WITH LOCK,
S0760      IN-FILE-66-1 WITH LOCK,
S0780      IN-FILE=WUC WITH LOCK,
S0790      MESSAGES,
S0791      DISPLAY : RECS COPIED FROM WUC FILE 1 NO-WUC-PROC
S0800      UPON CONSOLE,
S0810      DISPLAY 1 RECS COPIED FROM TABLE 2 1 NO-TAB2-PROC
S0820      UPON CONSOLE,
S0835      DISPLAY 1 EOU C9897 1 UPON CONSOLE,
S0840      GOBACK,
/*      PLACE COBOL SOURCE BEFORE THIS CARD
//CHG,TFGIN DO  *SPACE>[CYL,(1,1)]
/*      PLACE TFG DATA BEFORE THIS CARD
//TPR,TU14 00 01SP>[DLO,KEEP],VOL>SER>+F3,UNIT>T+F3
//TPR,TU24 DO  DISP>[OLD,KEEP],VOL>SER>+F7,UNIT>T+F7
//TPR,TPRIN DU  *SPACE>[TRK,(1,1)]
T/P TU12 19980802080
T/P TU14 19980202020
T/P TU24 19980202020
/*      PLACE T/P CONTROL CARDS BEFORE THIS CARD

```

1440 CDS

T14

T24

#### 6.5.4 DATA BANK PROGRAM

```

//C9097E JOB 01: G. WANG :PHTY>02:TYPRUN>H0LO
//C9897E EXEC F J655L,TIME>30,ACCT>035323007
//CHG,TU12 C) DISP>[PASS],UNIT>[A+F1,2,DEFER],DSN>+A,9895440, CT12/13 1
// VOL>SER>[+F1,A+F1,R+F1,C+F1,D+F1,E+F1,F+F1,G+F1,H+F1, CT12 2
// I+F1,J+F1,K+F1,L+F1,M+F1,N+F1,O+F1,P+F1,Q+F1,R+F1,S+F1] T12 3
//CHG,TU14 C) DISP>[PASS],UNIT>[T+F3,1,DEFER],DSN>+C,9895435, CT14 1
// VOL>SER>[+F3,A+F3,B+F3,C+F3,D+F3,E+F3,F+F3,G+F3,H+F3, CT14 2
// I+F3,J+F3,K+F3,L+F3,M+F3,N+F3,O+F3,P+F3,Q+F3,R+F3,S+F3] T14 3
//CHG,TU15 OJ DISP>[PASS],UNIT>[T+F4,1,DEFER],DSN>+O,9895455, CT15 1
// VOL>SER>[+F4,A+F4,B+F4,C+F4,D+F4,E+F4,F+F4,G+F4,H+F4, CT15 2
// I+F4,J+F4,K+F4,L+F4,M+F4,N+F4,O+F4,P+F4,Q+F4,R+F4,S+F4] T15 3
//CHG,TU22 DU DISP>[PASS],UNIT>[A+F5,2,DEFER],DSN>+L,9897405, CT22/23 1
// VOL>SER>[+F5,A+F5,B+F5,C+F5,D+F5,E+F5,F+F5,G+F5,H+F5, CT22 2
// I+F5,J+F5,K+F5,L+F5,M+F5,N+F5,O+F5,P+F5,Q+F5,R+F5,S+F5] T22 3
//CHG,TU24 D) DISP>[PASS],UNIT>[T+F7,1,DEFER],DSN>+G,9897404, CT24 1
// VOL>SER>[+F7,A+F7,B+F7,C+F7,D+F7,E+F7,F+F7,G+F7,H+F7, CT24 2
// I+F7,J+F7,K+F7,L+F7,M+F7,N+F7,O+F7,P+F7,Q+F7,R+F7,S+F7] T24 3
//CHG,TU25 C) DISP>[PASS],UNIT>[T+F8,1,DEFER],DSN>+H,9895422, CT25 1
// VOL>SER>[+F8,A+F8,B+F8,C+F8,D+F8,E+F8,F+F8,G+F8,H+F8, CT25 2
// I+F8,J+F8,K+F8,L+F8,M+F8,N+F8,O+F8,P+F8,Q+F8,R+F8,S+F8] T25 3
//CHG,INPUT O) *SPACE>[CYL,(1,1)] 1440 CDS
00000 COMPILE 0. WANG C98970
01040 DATE-WRITTEN: 7 FEB 72. C98970
01050 REMARKS. C98970
01060 DATA BANK PROGRAM FOR VE-12. C98970
02000 ENVIRONMENT DIVISION. C98970
02010 CONFIGURATION SECTION. C98970
02020 SOURCE-COMPUTER. IBM-360. C98970
02030 OBJECT-COMPUTER. IBM-360. C98970
02100 INPUT-OUTPUT SECTION. C98970
02110 FILE-CONTROL. C98970
02120 SELECT IN-FILE-65-110 ASSIGN TO UT-S-TU14 C98970
02130 RESERVE 2 ALTERNATE AREA. C98970
02140 SELECT IN-FILE-IRAN ASSIGN TO UT-S-TU25 C98970
02150 RESERVE 1 ALTERNATE AREA. C98970
02160 SELECT IN-FILE-AIE ASSIGN TO UT-S-TU15 C98970
02170 RESERVE 1 ALTERNATE AREA. C98970
02180 SELECT IN-FILE-66-1 ASSIGN TO UT-S-TU12 C98970
02190 RESERVE 2 ALTERNATE AREA. C98970
02200 SELECT IN-FILE-WUC ASSIGN TO UT-S-TU24 C98970
02210 RESERVE 1 ALTERNATE AREA. C98970
02220 SELECT OUT-FILE ASSIGN TO UT-S-TU22 C98970
02230 RESERVE 2 ALTERNATE AREA. C98970
02240 SELECT DATA-IN-FILE ASSIGN TO DA-S-DT01 C98970
02250 RESERVE 1 ALTERNATE AREA, C98970

```

10000	DATA DIVISION.		C98970
10010	FILE SECTION.		C98970
10100	FD IN-FILE-65-110		C98970
10120	RECORDING MODE IS F		C98970
10130	BLOCK CONTAINS 50 RECORDS		C98970
10140	RECORD CONTAINS 60	CHARACTERS	C98970
10150	LABEL RECORDS ARE OMITTED		C98970
10160	DATA RECORDS ARE IN-REC-65-110.		C98970
10170	01 IN-REC-65-110 SYNC.		C98970
10180	02 MIS-65-110.		C98970
10190	03 MISSION-65-110	PICTURE X.	C98970
10200	04 DESIGN-65-110	PICTURE XXX.	C98970
10210	05 SERIES-65-110	PICTURE X.	C98970
10220	02 FILLER	PICTURE X(23).	C98970
10230	02 MINT-CODE-65-110	PICTURE X.	C98970
10240	02 FILLER	PICTURE X.	C98970
10250	02 TIME-65-110	PICTURE 999.	C98970
10260	02 WUC-65-110	PICTURE X(5).	C98970
10270	02 WUC-2-65-110 REDEFINES WUC-65-110.		C98970
10280	03 LANDINGS-65-110	PICTURE 99.	C98970
10290	03 SORTIES-65-110	PICTURE 99.	C98970
10300	03 FILLER	PICTURE X.	C98970
10310	02 SER-NO-65-110	PICTURE X(8).	C98970
10320	02 FILLER	PICTURE XX.	C98970
10330	02 J-DAY-65-110	PICTURE 9(4).	C98970
10340	02 FILLER	PICTURE X(6).	C98970
10350	02 REC-ID-65-110	PICTURE X.	C98970
10360	02 FILLER	PICTURE X.	C98970
11100	FD IN-FILE-IRAN		C98970
11120	RECORDING MODE IS F		C98970
11130	BLOCK CONTAINS 30 RECORDS		C98970
11140	RECORD CONTAINS 80	CHARACTERS	C98970
11150	LABEL RECORDS ARE OMITTED		C98970
11160	DATA RECORDS ARE IN-REC-IRAN.		C98970
11170	01 IN-REC-IRAN SYNC.		C98970
11180	02 SER-NO-IRAN	PICTURE X(8).	C98970
11190	02 SERIES-IRAN	PICTURE X.	C98970
11200	02 FILLER	PICTURE X(7).	C98970
11210	02 IRAN-VIS-NO	PICTURE 9.	C98970
11220	02 FILLER	PICTURE X.	C98970
11230	02 IRAN-CODE	PICTURE 99.	C98970
11240	02 FILLER	PICTURE X(11).	C98970
11250	02 IRAN-START-UAY	PICTURE 99999.	C98970
11260	02 FILLER	PICTURE X.	C98970
11270	02 IRAN-END-DAY	PICTURE 99999.	C98970
11280	02 FILLER	PICTURE X(40).	C98970
12100	FD IN-FILE-AIE		C98970
12120	RECORDING MODE IS F		C98970
12130	BLOCK CONTAINS 60 RECORDS		C98970
12140	RECORD CONTAINS 50	CHARACTERS	C98970
12150	LABEL RECORDS ARE OMITTED		C98970
12160	DATA RECORDS ARE IN-REC-AIE.		C98970
12200	01 IN-REC-AIE SYNC.		C98970
12210	02 FILLER	PICTURE X(9).	C98970
12220	02 WUC-AIE	PICTURE X(5).	C98970
12230	02 FILLER	PICTURE X(10).	C98970
12240	02 SER-NO-AIE	PICTURE X(8).	C98970
12250	02 FILLER	PICTURE X(12).	C98970
12260	02 J-DAY-AIE	PICTURE 9999.	C98970
12270	02 FILLER	PICTURE XX.	C98970
13100	FD IN-FILE-66-1		C98970
13110	RECORDING MODE IS F		C98970
13120	BLOCK CONTAINS 30 RECORDS		C98970
13130	RECORD CONTAINS 90	CHARACTERS	C98970
13140	LABEL RECORDS ARE OMITTED		C98970
13150	DATA RECORDS ARE IN-REC-66-1.		C98970
13160	01 IN-REC-66-1 SYNC.		C98970
13170	02 MIS-66-1.		C98970
13180	03 MISSION-66-1	PICTURE XXX.	C98970
13190	04 DESIGN-66-1	PICTURE XXX.	C98970
13200	05 SERIES-66-1	PICTURE X.	C98970
13210	02 FILLER	PICTURE X(7).	C98970
13220	02 SER-NO-66-1	PICTURE X(8).	C98970
13230	02 FILLER	PICTURE X(23).	C98970
13240	02 WUC-66-1	PICTURE X(5).	C98970
13250	02 AIC-66-1	PICTURE X.	C98970
13260	02 WUC-66-1	PICTURE X.	C98970
13270	02 HMC-66-1	PICTURE XXX.	C98970
13280	02 UNITS-66-1	PICTURE 99.	C98970
13290	02 LABOR-66-1	PICTURE 9(4).	C98970
13300	02 FILLER	PICTURE X(24).	C98970
13310	02 J-DAY-66-1	PICTURE 9(4).	C98970
13320	02 FILLER	PICTURE X.	C98970
14100	FD IN-FILL-WUC		C98970
14120	RECORDING MODE IS F		C98970
14130	BLOCK CONTAINS 50 RECORDS		C98970

14140	RECORD CONTAINS 20	CHARACTERS		C98970
14150	LABEL RECORDS ARE OMITTED			C98970
14160	DATA RECORDS ARE REC-IN-WUC.			C98970
14170	01 REC-IN-WUC SYNC.			C98970
14180	02 IN-REC-WUC	PICTURE XXXXX.		C98970
14190	02 F'LLER	PICTURE X[15].		C98970
15100	FD OUT-FILE			C98970
15120	RECORDING MODE IS F			C98970
15130	BLOCK CONTAINS 60 RECORDS			C98970
15140	RECORD CONTAINS 50	CHARACTERS		C98970
15150	LABEL RECORDS ARE OMITTED			C98970
15160	DATA RECORDS ARE OUT-REC.			C98970
15170	01 OUT-REC SYNC.			C98970
15180	02 F'LLER	PICTURE X[50].		C98970
16100	FD DATA-IN-FILE			C98970
16110	RECORDING MODE IS F			C98970
16130	BLOCK CONTAINS 20 RECORDS			C98970
16140	RECORD CONTAINS 80	CHARACTERS		C98970
16150	LABEL RECORDS ARE STANDARD			C98970
16160	DATA RECORDS ARE DATA-IN-REC.			C98970
16200	01 DATA-IN-REC	PICTURE X[80].		C98970
30000	WORKING-STORAGE SECTION.			C98970
30020	77 CUR-WLEK SYNC	PICTURE 999	VALUE ZERO.	C98970
30030	77 IRAN-I LAG SYNC	PICTURE 9	VALUE ZERO.	C98970
30040	77 FILE-I ON-DATA SYNC	PICTURE 9	VALUE ZERO.	C98970
30050	77 CUR-S-M SYNC	PICTURE X[8]	VALUE SPACE.	C98970
30060	77 DATA-AVAIL-CODE SYNC	PICTURE 9[4]	VALUE ZERO.	C98970
30070	77 IN-IRAN SYNC	PICTURE 9	VALUE ZERO.	C98970
30080	77 START-IRAN-DAY SYNC	PICTURE S9999	VALUE ZERO.	C98970
30090	77 END-IRAN-DAY SYNC	PICTURE S9999	VALUE ZERO.	C98970
30100	77 JDAY SYNC	PICTURE 9999	VALUE ZERO.	C98970
30110	77 WUC-TYPE SYNC	PICTURE 9	VALUE ZERO.	C98970
30140	77 POS-TABLE-3 SYNC	PICTURE 999	VALUE ZERO.	C98970
30150	77 POS-TABLE-4 SYNC	PICTURE 999	VALUE ZERO.	C98970
30160	77 EOF-S-N SYNC	PICTURE X[8]	VALUE 1999999991.	C98970
30170	77 EOF-JDAY SYNC	PICTURE 9[4]	VALUE 9999.	C98970
30210	77 WUC-09 SYNC	PICTURE XX	VALUE 1091.	C98970
30220	77 NINE-11 SYNC	PICTURE X	VALUE 191.	C98970
30230	77 NINE-73 SYNC	PICTURE XXX	VALUE 19991.	C98970
30240	77 NINE-X5 SYNC	PICTURE X[5]	VALUE 199999.	C98970
30260	77 NINE-94 SYNC	PICTURE S9999	VALUE -9999.	C98970
30270	77 NINE-53 SYNC	PICTURE S999	VALUE -999.	C98970
30280	77 TABLE-SIZE SYNC	PICTURE 999	VALUE 250.	C98970
30290	77 TAB-SIZ-1 SYNC	PICTURE 999	VALUE 251.	C98970
30330	77 REC-61-110-TYPE-1-ONLY SYNC	PICTURE X VALUE SPACE.		C98970
30331	77 MAX-TAB-3 SYNC COMPUTATIONAL	PICTURE S999	VALUE ZERO.	C98970
30332	77 MAX-TAB-4 SYNC COMPUTATIONAL	PICTURE S999	VALUE ZERO.	C98970
30340	77 R-B SYNC COMPUTATIONAL	PICTURE S999	VALUE <60.	C98970
30350	77 ATC-110X COMPUTATIONAL	PICTURE S999	VALUE ZERO SYNC.	C98970
30400	01 NO-A-C-PROC	PICTURE 999	VALUE ZERO SYNC.	C98970
30410	01 LIST-SEK-NO SYNC.			C98970
30420	02 SEK-NO OCCURS 4 TIMES	PICTURE X[6].		C98970
30430	01 LIST-WEEK-NO SYNC.			C98970
30440	02 WEEK-NO OCCURS 4 TIMES	PICTURE 999.		C98970
30450	01 NO-WEEK-PROC	PICTURE 999	VALUE ZERO SYNC.	C98970
30460	01 WUC-TEMP SYNC.			C98970
30470	02 WUC-MJR	PICTURE XX.		C98970
30480	02 F'LLER	PICTURE XXX.		C98970
30490	01 WUC-1 REDEFINES WUC-TEMP SYNC.			C98970
30500	02 WUC-3-DIG	PICTURE XXX.		C98970
30510	02 WUC-2-DIG	PICTURE XX.		C98970
30520	01 KN7 COMPUTATIONAL	PICTURE S9999	VALUE ZERO SYNC.	C98970
30530	01 KNA COMPUTATIONAL	PICTURE S9999	VALUE ZERO SYNC.	C98970
30540	01 KNB COMPUTATIONAL	PICTURE S9999	VALUE ZERO SYNC.	C98970
30550	01 WEEK-NO-COMP	PICTURE 999	SYNC.	C98970
30560	01 TEMP SYNC	PICTURE S999.		C98970
30590	01 LIST-DATA-WEEK SYNC.			C98970
30600	02 DATA-WEEK OCCURS 4 TIMES	PICTURE S9.		C98970
30601	01 LIST-DATA-WEEK-A REDEFINES LIST-DATA-WEEK SYNC.			C98970
30602	02 DATA-WEEK-1	PICTURE S9.		C98970
30603	02 DATA-WEEK-2	PICTURE S9.		C98970
30604	02 DATA-WEEK-3	PICTURE S9.		C98970
30605	02 DATA-WEEK-4	PICTURE S9.		C98970
30610	01 ONE SYNC	PICTURE 9	VALUE 1.	C98970
30620	01 FILE-NO SYNC	PICTURE S99	COMPUTATIONAL.	C98970
30630	01 SN-TEMP SYNC	PICTURE X[8].		C98970

30930	02	FILE-DATA-3	PICTURE 9	VALUE 1.	C98970
30940		J2 FILE-DATA-4	PICTURE 9	VALUE 1.	C98970
30950	01	FILLER	REDEFINES DEFINE-FILE-DATA SYNC.		C98970
30960		02 FILE-DATA OCCURS 4 TIMES PICTURE 9.			C98970
31100	01	DEFINE-MON-CODES SYNC.			C98970
31240		02 MON-CODE OCCURS 17 TIMES PICTURE X.			C98970
31400	01	WUC-ENGINES SYNC.			C98970
31490		02 ENGINE-WUC	PICTURE XXX OCCURS 7 TIMES.		C98970
31600	01	TABLE-WUC SYNC.			C98970
31610		02 LIST-WUC OCCURS 3000 TIMES PICTURE X(5).			C98970
32100	01	WUC-DEFINE-TABLE SYNC.			C98970
33510		02 WUC-POS-TYPE OCCURS 22 TIMES PICTURE XX.			C98970
33520		02 WUC-POS-START OCCURS 22 TIMES PICTURE 9999.			C98970
33530		02 WUC-POS-END OCCURS 22 TIMES PICTURE 9999.			C98970
40000	01	REC-TYPE-1 SYNC.			C98970
40010		02 MDS-TYPE-1.			C98970
40020		03 MISSION-TYPE-1	PICTURE X.		C98970
40030		03 DESIGN-TYPE-1	PICTURE XXX.		C98970
40040		03 SERIES-TYPE-1	PICTURE X.		C98970
40050		02 SER-NO-TYPE-1	PICTURE X(4).		C98970
40060		02 WEEK-NO-TYPE-1	PICTURE 999.		C98970
40070		02 FILLER	PICTURE X(12)	VALUE SPACE.	C98970
40080		02 FLT-TIME-TYPE-1	PICTURE S9999.		C98970
40090		02 FILLER	PICTURE X(3)	VALUE SPACE.	C98970
40100		02 SORTIES-TYPE-1	PICTURE S9999.		C98970
40120		02 LAUNINGS-TYPE-1	PICTURE S9999.		C98970
40130		02 FILLER	PICTURE X(05)	VALUE SPACE.	C98970
40140		02 REC-ID-TYPE-1	PICTURE 9	VALUE 1.	C98970
40150		02 FILLER	PICTURE X	VALUE SPACE.	C98970
40400	01	REC-TYPE-2 SYNC.			C98970
40410		02 MDS-TYPE-2.			C98970
40420		03 MISSION-TYPE-2	PICTURE X.		C98970
40430		03 DESIGN-TYPE-2	PICTURE XXX.		C98970
40440		03 SERIES-TYPE-2	PICTURE X.		C98970
40450		02 SER-NO-TYPE-2	PICTURE X(4).		C98970
40460		02 WEEK-NO-TYPE-2	PICTURE 999.		C98970
40470		02 FILLER	PICTURE X(9)	VALUE SPACE.	C98970
40480		02 INAV-VIS-NO-TYPE-2	PICTURE S999.		C98970
40490		02 FILLER	PICTURE X(4)	VALUE SPACE.	C98970
40500		02 INAV-CODE-TYPE-2	PICTURE S999.		C98970
40510		02 INAV-START-DAY-TYPE-2	PICTURE S9999.		C98970
40530		02 INAV-END-DAY-TYPE-2	PICTURE S9999.		C98970
40540		02 FILLER	PICTURE X(05)	VALUE SPACE.	C98970
40550		02 REC-ID-TYPE-2	PICTURE 9	VALUE 2.	C98970
40560		02 FILLER	PICTURE X	VALUE SPACE.	C98970
40700	01	REC-TYPE-3 SYNC.			C98970
40710		02 MDS-TYPE-3.			C98970
40720		03 MISSION-TYPE-3	PICTURE X.		C98970
40730		03 DESIGN-TYPE-3	PICTURE XXX.		C98970
40740		03 SERIES-TYPE-3	PICTURE X.		C98970
40750		02 SER-NO-TYPE-3	PICTURE X(4).		C98970
40760		02 WEEK-NO-TYPE-3	PICTURE 999.		C98970
40770		02 WUC-TYPE-3	PICTURE X(5).		C98970
40780		02 FILLER	PICTURE X(4)	VALUE SPACE.	C98970
40790		02 DATA-TYPE-3A.			C98970
40800		03 UNITS-TYPE-3	PICTURE S999.		C98970
40810		03 LARON-TYPE-3	PICTURE S9999.		C98970
40840		03 AIE-TYPE-3	PICTURE S999.		C98970
40850		03 NORM-TYPE-3	PICTURE S9999.		C98970
40874		03 NORS-TYPE-3	PICTURE S9999.		C98970
40876		03 UNITS-AIC-TYPE-3	PICTURE S999.		C98970
40880		02 FILLER	PICTURE X(02)	VALUE SPACE.	C98970
40890		02 REC-ID-TYPE-3	PICTURE 9	VALUE 3.	C98970
40900		02 FILLER	PICTURE X	VALUE SPACE.	C98970
41100	01	REC-TYPE-4 SYNC.			C98970
41110		02 MDS-TYPE-4.			C98970
41120		03 MISSION-TYPE-4	PICTURE X.		C98970
41130		03 DESIGN-TYPE-4	PICTURE XXX.		C98970
41140		03 SERIES-TYPE-4	PICTURE X.		C98970
41150		02 SER-NO-TYPE-4	PICTURE X(8).		C98970
41160		02 WEEK-NO-TYPE-4	PICTURE 999.		C98970
41170		02 DATA-TYPE-4.			C98970
41180		03 WUC-TYPE-4	PICTURE X(5).		C98970
41230		03 WDC-TYPE-4	PICTURE X.		C98970
41250		03 HMC-TYPE-4	PICTURE XXX.		C98970
41260		03 UNITS-TYPE-4	PICTURE S999.		C98970
41270		03 MHS-TYPE-4	PICTURE S9999.		C98970
41280		02 FILLER	PICTURE X(16)	VALUE SPACE.	C98970
41290		02 REC-ID-TYPE-4	PICTURE 9	VALUE 4.	C98970
41300		02 FILLER	PICTURE X	VALUE SPACE.	C98970
42000	01	TABLE-3 SYNC.			C98970
42010		02 TABLE-3-ROW OCCURS 250 TIMES.			C98970
42020		03 TABLE-3-WUC	PICTURE X(5).		C98970
42030		03 TABLE-3-DATAA.			C98970
42040		04 TABLE-3-UNITS	PICTURE S999.		C98970
42050		04 TABLE-3-LARON	PICTURE S9999.		C98970
42070		04 TABLE-3-AIE	PICTURE S999.		C98970

42080	04	TABLE-3-NORM	PICTURE S9999.	C98970
42120	04	TABLE-3-NORS	PICTURE S9999.	C98970
42130	04	TABLE-3-UNITS-ATC		C98970
42140			PICTURE S999.	C98970
42200	01	TABLE-4 SYNC.		C98970
42210	02	TABLE-4-ROW OCCURS 250 TIMES.		C98970
42220	03	TABLE-4-WUC	PICTURE X(5).	C98970
42230	03	TABLE-4-WDC	PICTURE X.	C98970
42250	03	TABLE-4-MMC	PICTURE XXX.	C98970
42260	03	TABLE-4-UNITS	PICTURE S999.	C98970
42270	03	TABLE-4-MHRS	PICTURE S9999.	C98970
43000	01	DATA-IN-A SYNC.		C98970
43010	05	WUC-SCHED-INSP	PICTURE XX.	C98970
43020	05	FILLER	PICTURE XXX.	C98970
43030	05	WUC-SPEC-INSP	PICTURE XX.	C98970
43040	05	FILLER	PICTURE XXX.	C98970
43050	05	FIRST-A-C	PICTURE X(4).	C98970
43060	05	FILLER	PICTURE XX.	C98970
43070	05	FIRST-WEEK	PICTURE X(5).	C98970
43080	05	LAST-WEEK	PICTURE X(5).	C98970
43090	05	FILLER	PICTURE X.	C98970
43100	05	MISSION-IN	PICTURE X.	C98970
43110	05	DESIGN-IN	PICTURE XXX.	C98970
43120	05	NO-AC-TO-PROC	PICTURE X(5).	C98970
43130	05	FILLER	PICTURE X(40).	C98970
43200	01	DATA-IN-B SYNC.		C98970
43210	05	NUM-ATC	PICTURE 999.	C98970
43220	05	FILLER	PICTURE X(77).	C98970
43300	01	DATA-IN-C SYNC.		C98970
43310	05	X-CODE	PICTURE X.	C98970
43320	05	FILLER	PICTURE X(79).	C98970
43400	01	DATA-IN-D SYNC.		C98970
43410	05	NUM-NUMCODES	PICTURE 999.	C98970
43420	05	NUM-NORM	PICTURE 999.	C98970
43430	05	FILLER	PICTURE X(74).	C98970
43500	01	DATA-IN-E SYNC.		C98970
43510	05	NUM-ENG-WUC	PICTURE 999.	C98970
43520	05	FILLER	PICTURE X(77).	C98970
43600	01	DATA-IN-F SYNC.		C98970
43610	05	ENG-WUC-IN	PICTURE XXX.	C98970
43620	05	FILLER	PICTURE X(77).	C98970
43700	01	DATA-IN-G SYNC.		C98970
43710	05	NUM-WUC-GROUPS	PICTURE 999.	C98970
43720	05	FILLER	PICTURE XXX.	C98970
43730	05	MAX-NUM-WUC	PICTURE 9999.	C98970
43740	05	FILLER	PICTURE X(70).	C98970
43800	01	DATA-IN-H SYNC.		C98970
43810	05	WUC-2DIG-IN	PICTURE XX.	C98970
43820	05	FILLER	PICTURE XXX.	C98970
43830	05	FIRST-POSITION	PICTURE X(5).	C98970
43840	05	LAST-POSITION	PICTURE X(5).	C98970
43850	05	FILLER	PICTURE X(65).	C98970
43900	01	FILLER SYNC.		C98970
43910	05	LIST-ATC	PICTURE X OCCURS 5 TIMES.	C98970
50000		PROCEDURE DIVISION.		C98970
50010		OPEN=FILES.		C98970
50020		OPEN INPUT IN-FILE-65-I10, IN-FILE-IRAN, IN-FILE-AIE,		C98970
50030		IN-FILE-66-I, IN-FILE-WUC.		C98970
50040		OPEN OUTPUT OUT-FILE.		C98970
50045		OPEN INPUT OATA-IN-FILE.		C98970
50050		MOVL ZERO TO NO-A-C-PROC.		C98970
50060		MOVL ZERO TO IRAN-FLAG.		C98970
50065		PERFORM READ-OATA-IN-FILE THRU END-HDIF.		C98970
50070		NOTE HEAD LIST OF WORK-UNIT-CODES.		C98970
50080		PERFORM READ-WUC-LIST THRU END-HEAD-WUC-LIST.		C98970
50085		CLOSE IN-FILE-WUC WITH LOCK.		C98970
50090		NOTE FIND LOWEST SERIAL NUMBER AND WEEK FOR INPUT DATA		C98970
50100		FILLS.		C98970
50110		PERFORM INIT-SN-WK THRU END-INIT-SN-WK.		C98970
50120		NOTE FIND FILE WITH LOWEST SERIAL NUMBER-WEEK.		C98970
50130		PERFORM ST-SN-WK THRU END-ST-SN-WK.		C98970
50140		NEW-SEP-NO.		C98970
50150		MOVE FILE-LOW-DATA TO FILE-NO.		C98970
50160		MOVE SER-NO (FILE-NO) TO CUR-S-N.		C98970
50170		MOVE WEEK-NO (FILE-NO) TO CUR-WEEK.		C98970
50180		MOVE ZERO TO NO-WEEK-PROC.		C98970
50190		NOTE ROUTINE TO START DATA BANK WHEN 65-110		C98970
50200		AND 66-I IS AVAILABLE.		C98970
50210		PERFORM START-BANK THRU END-START-BANK.		C98970
50220		IF IRAN-FLAG NOT EQUAL TO ZERO,		C98970
50230		PERFORM RESET-WEEK THRU END-RESET.		C98970
50240		ELSE, PERFORM RESET-SER-NO THRU END-RESET.		C98970
50250		MOVE ZERO TO IRAN-FLAG.		C98970
50260		MOVE ZERO TO NO-WEEK-PROC.		C98970
50270		IF DATA-Avail-CODE EQUAL TO ZERO GO TO SN-WEEK-DONE.		C98970
50280		NOTE PROCESS ONE SERIAL NUMBER-WEEK.		C98970
50290		NEXT-WEEK.		C98970

50301	IF DATA-WEEK-2 IS NOT EQUAL TO ZERO PERFORM RESET-IRAN	C98970
50302	THRU END-RESET.	C98970
50303	IF DATA-WEEK-3 IS NOT EQUAL TO ZERO PERFORM RESET-AIE	C98970
50304	THRU END-RESET.	C98970
50305	IF DATA-WEEK-4 IS NOT EQUAL TO ZERO PERFORM RESET-66-1	C98970
50306	THRU END-RESET.	C98970
50307	IF DATA-WEEK-1 IS NOT EQUAL TO ZERO PERFORM RESET-65-110	C98970
50308	THRU END-RESET.	C98970
50309	IF DATA-WEEK-2 NOT EQUAL TO ZERO	C98970
50310	PERFORM SN-WK-IRAN THRU END-SN-WK-IRAN.	C98970
50320	IF DATA-WEEK-3 NOT EQUAL TO ZERO	C98970
50330	PERFORM SN-WK-AIE THRU END-SN-WK-AIE.	C98970
50340	IF DATA-WEEK-4 NOT EQUAL TO ZERO	C98970
50350	PERFORM SN-WK-66-1 THRU END-SN-WK-66-1.	C98970
50360	IF DATA-WEEK-1 NOT EQUAL TO ZERO	C98970
50370	PERFORM SN-WK-65-110 THRU END-SN-WK-65-110.	C98970
50380	SN-WEEK-DONE.	C98970
50390	PERFORM WRITE-BANK THRU END-WRITE-BANK.	C98970
50400	ADD ONE TO CUR-WEEK.	C98970
50410	IF CUR-WEEK GREATER THAN LAST-WEEK	C98970
50420	GO TO SERIAL-NO-DONE.	C98970
50430	IF IRAN-FLAG EQUAL TO ZERO	C98970
50440	GO TO WEEK-RESET.	C98970
50450	COMPUTE WEEK-NO-COMP > (END-IRAN-DAY < 3) / 7 < 1.	C98970
50460	IF CUR-WEEK GREATER THAN WEEK-NO-COMP	C98970
50470	MOVE ZERO TO IRAN-FLAG.	C98970
50480	WEEK-RESET.	C98970
50490	PERFORM RESET-WEEK THRU END-RESET.	C98970
50500	PERFORM DATA-AVAIL THRU END-DATA-AVAIL.	C98970
50510	IF DATA-AVAIL-CODE EQUAL TO ZERO	C98970
50520	GO TO SN-WEEK-DONE.	C98970
50530	GO TO NEXT-WEEK.	C98970
50540	SERIAL-NO-DONE.	C98970
50550	PERFORM RESET-SER-NO THRU END-RESET.	C98970
50555	MOVE ZLRO TO IRAN-FLAG.	C98970
50560	ADD ONE TO NO-A-C-PROC.	C98970
50570	IF NO-A-C-PROC IS NOT LESS THAN NO-AC-TO-PROC.	C98970
50580	GO TO BLOCK-CHECK.	C98970
50590	NOTE CHECK IF ALL FILES HAVE EOF.	C98970
50600	PERFORM FILES-EOF THRU END-FILES-EOF.	C98970
50610	IF ALL-EOF NOT EQUAL TO ZERO	C98970
50620	GO TO NEW-SER-NO.	C98970
50630	NOTE AIRCRAFT SERIAL NUMBERS PROCESSING COMPLETED.	C98970
50640	BLOCK-CHECK.	C98970
50650	COMPUTE KNT > RECORDS-PASS - RECORDS-PASS / R-B * R-B.	C98970
50660	IF KNT EQUAL TO ZERO	C98970
50670	GO TO CLOSE-FILES.	C98970
50680	NINE-FILL.	C98970
50690	WRITE OUT-REC FROM NINES.	C98970
50700	ADD ONE TO KNT.	C98970
50710	IF KNT IS LESS THAN R-B GO TO NINE-FILL.	C98970
50720	CLOSE-FILES.	C98970
50730	CLOSE IN-FILE-65-110 WITH LOCK.	C98970
50740	IN-FILE-IRAN WITH LOCK.	C98970
50750	IN-FILE-AIE WITH LOCK.	C98970
50760	IN-FILE-66-1 WITH LOCK.	C98970
50780	CUT-FILE WITH LOCK.	C98970
50781	CLOSE DATA-IN-FILE WITH LOCK.	C98970
50790	MESSAGES.	C98970
50791	DISPLAY : SER-NO : CUR-S-N : WEEK : CUR-WEEK UPON CONSOLE.	C98970
50800	DISPLAY : RECORDS WRITTEN IN DATA BANK : RECORDS-PASS	C98970
50810	UPON CONSOLE.	C98970
50820	DISPLAY : NUMBER A/C PROCESSED : NO-A-C-PROC	C98970
50830	UPON CONSOLE.	C98970
50831	DISPLAY : MAX TAB 3 : MAX-TAB-3 : MAX TAB 4 : I	C98970
50832	MAX-TAB-4 UPON CONSOLE.	C98970
50835	DISPLAY : EOF C9897 : UPON CONSOLE.	C98970
50840	GOBACK.	C98970
69000	CHECK-IN-IRAN.	C98970
69020	MOVE ZERO TO IN-IRAN.	C98970
69030	IF IRAN-FLAG IS EQUAL TO ZERO GO TO END-CHECK-IN-IRAN.	C98970
69040	IF JDAY LESS THAN START-IRAN-DAY GO TO END-CHECK-IN-IRAN.	C98970
69050	IF JDAY GREATER THAN END-IRAN-DAY GO TO END-CHECK-IN-IRAN.	C98970
69060	MOVE ONE TO IN-IRAN.	C98970
69070	END-CHECK-IN-IRAN.	C98970
69080	EXIT.	C98970
70000	PROC-WUC.	C98970
70010	MOVE ZERO TO WUC-TYPE.	C98970
70020	IF WUC-TEMP IS EQUAL TO SPACE THEN GO TO END-PROC-WUC.	C98970
70030	IF WUC-MJR IS GREATER THAN WUC-09 GO TO PROC-WUC-NS0.	C98970
70040	IF WUC-MJR IS EQUAL TO WUC-SCHED-INS0 GO TO	C98970
70050	PROC-WUC-ACCPY-S0.	C98970
70060	IF WUC-MJR IS EQUAL TO WUC-SPEC-INS0 GO TO PROC-WUC-ACCPY-S0.	C98970
70070	GO TO END-PROC-WUC.	C98970
70100	PROC-WUC-ACCPY-S0.	C98970
70110	MOVE I TO WUC-TYPE.	C98970
70120	GO TO END-PROC-WUC.	C98970

70200	PROC-WUC-NSG.	C98970
70210	IF POS-TABLE-3 IS EQUAL TO ZERO GO TO PROC-WUC-3.	C98970
70220	MOVE 1 TO KNT.	C98970
70230	PHOC-WUC-4.	C98970
70240	IF WUC-TEMP IS EQUAL TO TABLE-3-WUC [KNT] THEN GO TO	C98970
70250	PROC-WUC-ACCPY-NSG.	C98970
70260	ADD 1 TO KNT.	C98970
70270	IF KNT IS GREATER THAN POS-TABLE-3 THEN GO TO PROC-WUC-3.	C98970
70280	GO TO PROC-WUC-4.	C98970
70300	PHOC-WUC-3.	C98970
70310	IF POS-TABLE-4 IS EQUAL TO ZERO GO TO PROC-WUC-ENG5.	C98970
70320	MOVE 1 TO KNT.	C98970
70330	PROC-WUC-6.	C98970
70340	IF WUC-TEMP IS EQUAL TO TABLE-4-WUC [KNT] THEN GO TO	C98970
70350	PROC-WUC-ACCPY-NSG.	C98970
70360	ADD 1 TO KNT.	C98970
70370	IF KNT IS GREATER THAN POS-TABLE-4 THEN GO TO PROC-WUC-ENG5.	C98970
70380	GO TO PROC-WUC-6.	C98970
70400	PHOC-WUC-ENG5.	C98970
70410	MOVE 1 TO KNT.	C98970
70420	PROC-WUC-7	C98970
70430	IF WUC-3-DIG IS EQUAL TO ENGINE-WUC [KNT] THEN GO TO	C98970
70440	PROC-WUC-ACCPY-ENG5.	C98970
70450	ADD 1 TO KNT.	C98970
70460	IF KNT IS GREATER THAN NUM-ENG-WUC GO TO PROC-WUC-MJR.	C98970
70470	GO TO PROC-WUC-7.	C98970
70500	PROC-WUC-ACCPY-ENG5.	C98970
70510	MOVE SPACE TO WUC-2-DIG.	C98970
70520	PROC-WUC-ACCPY-NSG.	C98970
70530	MOVE 2 TO WUC-TYPE.	C98970
70540	GO TO LND-PROC-WUC.	C98970
70600	PHOC-WUC-M.N.	C98970
70610	MOVE 1 TO KNA.	C98970
70620	PROC-WUC-8.	C98970
70630	IF WUC-MJR IS EQUAL TO WUC-POS-TYPE [KNA] GO TO PROC-WUC-MIN.	C98970
70640	ADD 1 TO KNA.	C98970
70650	IF KNA IS GREATER THAN NUM-WUC-GROUPS GO TO END-PROC-WUC.	C98970
70660	GO TO PROC-WUC-8.	C98970
70700	PROC-WUC-M.N.	C98970
70710	MOVE WUC-POS-START [KNA] TO KNT.	C98970
70720	MOVE WUC-POS-END [KNA] TO KNR.	C98970
70800	PROC-WUC-9.	C98970
70810	IF WUC-TEMP IS EQUAL TO LIST-WUC [KNT] GO TO	C98970
70820	PROC-WUC-ACCPY-NSG.	C98970
70830	ADD 1 TO KNT.	C98970
70840	IF KNT IS GREATER THAN KNR GO TO END-PROC-WUC.	C98970
70850	GO TO PROC-WUC-9.	C98970
70900	END-PROC-WUC. EXIT.	C98970
72000	PROC-65-110.	C98970
72010	MOVE JDAY-65-110 TO JDAY.	C98970
72020	PERFORM CHECK-IN-IRAN THRU END-CHECK-IN-IRAN.	C98970
72030	IF IN-IRAN IS EQUAL TO 1 GO TO END-PROC-65-110.	C98970
72040	IF REC-ID-65-110 IS EQUAL TO :2: GO TO PROC-65-110-A.	C98970
72050	IF REC-ID-65-110 IS GREATER THAN :2: GO TO PROC-65-110-B.	C98970
72060	GO TO END-PROC-65-110.	C98970
72070	PROC-65-110-B.	C98970
72080	IF REC-ID-65-110 IS GREATER THAN :9: GO TO END-PROC-65-110.	C98970
72090	NOTE REC-ID-65-110 HAS VALUE 3 TO 9 AT THIS POINT.	C98970
72100	ADD TIME-65-110 TO FLT-TIME-TYPE-1.	C98970
72105	MOVE :1: TO REC-65-110-TYPE-1-ONLY.	C98970
72110	ADD SORTIES-65-110 TO SORTIES-TYPE-1.	C98970
72120	ADD LANDINGS-65-110 TO LANDINGS-TYPE-1.	C98970
72130	IF SERIES-TYPE-1 IS EQUAL TO SPACE THEN MOVE SERIES-65-110	C98970
72140	TO SERIES-TYPE-1.	C98970
72150	GO TO END-PROC-65-110.	C98970
72200	PROC-65-110-A.	C98970
72220	MOVE WUC-65-110 TO WUC-TEMP.	C98970
72230	PERFORM PROC-WUC THRU END-PROC-WUC.	C98970
72240	IF WUC-TYPE IS EQUAL TO ZERO GO TO END-PROC-65-110.	C98970
72245	MOVE :1: TO REC-65-110-TYPE-1-ONLY.	C98970
72250	MOVE 1 TO KNT.	C98970
72260	IF POS-TABLE-3 EQUAL TO ZERO GO TO PROC-65-110-E.	C98970
72270	PROC-65-110-C.	C98970
72280	IF WUC-TEMP IS EQUAL TO TABLE-3-WUC [KNT] THEN GO TO	C98970
72290	PROC-65-110-D.	C98970
72300	ADD 1 TO KNT.	C98970
72310	IF KNT IS GREATER THAN POS-TABLE-3 GO TO PROC-65-110-E.	C98970
72320	GO TO PROC-65-110-C.	C98970
72400	PROC-65-110-E.	C98970
72410	MOVE KNT TO POS-TABLE-3.	C98970
72414	IF POS-TABLE-3 IS GREATER THAN MAX-TAB-3 MOVE POS-TABLE-3	C98970
72415	TO MAX-TAB-3.	C98970
72420	IF POS-TABLE-3 IS GREATER THAN TABLE-SIZE GO TO PROC-65-ERR.	C98970
72430	MOVE WUC-TEMP TO TABLE-3-WUC [KNT].	C98970
72440	IF SERIES-TYPE-3 IS EQUAL TO SPACE THEN MOVE SERIES-65-110	C98970
72450	TO SERIES-TYPE-3.	C98970



72500	PROC-65-110-0.	C98970
72510	MOVE 1 TO KNA.	C98970
72520	PROC-65-110-F.	C98970
72530	IF MAILIT-CODE-65-110 IS EQUAL TO NOR-CODE [KNA] GO TO	C98970
72540	PROC-65-110-0.	C98970
72550	ADD 1 TO KNA.	C98970
72560	IF KNA IS GREATER THAN NUM-NCODES GO TO END-PROC-65-110.	C98970
72570	GO TO PROC-65-110-F.	C98970
72600	PROC-65-110-6.	C98970
72610	IF KNA IS NOT GREATER THAN NUM-NORM THEN ADD TIME-65-110 TO	C98970
72620	TABLE-3-NORM [KNT].	C98970
72630	IF KNA IS GREATER THAN NUM-NORM THEN ADD TIME-65-110 TO	C98970
72640	TABLE-3-NORMS [KNT].	C98970
72690	GO TO END-PROC-65-110.	C98970
72800	PROC-65-ERR.	C98970
72810	DISPLAY : TABLE SIZE EXCEEDED IN TABLE-3 1 UPON CONSOLE.	C98970
72820	GO TO CLOSE-FILES.	C98970
72900	END-PROC-65-110. EXIT.	C98970
73000	PROC-IRAN.	C98970
73010	MOVE IRAN-VIS-NO TO IRAN-VIS-NO-TYPE-2.	C98970
73020	MOVE IRAN-CODE TO IRAN-CODE-TYPE-2.	C98970
73030	MOVE IRAN-START-DAY TO IRAN-START-DAY-TYPE-2.	C98970
73040	MOVE IRAN-START-DAY TO START-IRAN-DAY.	C98970
73050	IF IRAN-END-DAY IS EQUAL TO ZERO THEN MOVE 9999 TO	C98970
73060	IRAN-END-DAY.	C98970
73070	MOVE IRAN-END-DAY TO IRAN-END-DAY-TYPE-2.	C98970
73080	MOVE IRAN-END-DAY TO END-IRAN-DAY.	C98970
73090	MOVE 1 TO IRAN-FLAG.	C98970
73100	IF SERIES-TYPE-2 IS EQUAL TO SPACE THEN MOVE SERIES-IRAN	C98970
73110	TO SERIES-TYPE-2.	C98970
73900	END-PROC-IRAN. EXIT.	C98970
74000	PROC-AIE.	C98970
74010	MOVE J-UY-AIE TO JOAY.	C98970
74020	PERFORM CHECK-IN-IRAN THRU END-CHECK-IN-IRAN.	C98970
74030	IF IN-IRAN IS EQUAL TO 1 GO TO END-PROC-AIE.	C98970
74040	MOVE WUC-AIE TO WUC-TEMP.	C98970
74050	PERFORM PROC-WUC THRU END-PROC-WUC.	C98970
74060	IF WUC-TYPE IS EQUAL TO ZERO GO TO END-PROC-AIE.	C98970
74100	MOVE 1 TO KNT.	C98970
74110	IF POS-TABLE-3 IS EQUAL TO ZERO GO TO PROC-AIE-A.	C98970
74120	PROC-AIE-B.	C98970
74130	IF WUC-TEMP IS EQUAL TO TABLE-3-WUC [KNT] THEN GO TO	C98970
74140	PROC-AIE-C.	C98970
74150	ADD 1 TO KNT.	C98970
74160	IF KNT IS GREATER THAN POS-TABLE-3 GO TO PROC-AIE-A.	C98970
74170	GO TO PROC-AIE-B.	C98970
74200	PROC-AIE-A.	C98970
74210	MOVE KNT TO POS-TABLE-3.	C98970
74214	IF POS-TABLE-3 IS GREATER THAN MAX-TAB-3 MOVE POS-TABLE-3	C98970
74215	TO MAX-TAB-3.	C98970
74220	IF POS-TABLE-3 IS GREATER THAN TABLE-SIZE GO TO PROC-AIE-ERR.	C98970
74230	MOVE WUC-TEMP TO TABLE-3-WUC [KNT].	C98970
74300	PROC-AIE-C.	C98970
74310	ADD 1 TO TABLE-3-AIE [KNT].	C98970
74320	GO TO END-PROC-AIE.	C98970
74910	PROC-AIE-ERR.	C98970
74920	DISPLAY : TABLE-SIZE EXCEEDED IN TABLE-3 1 UPON CONSOLE.	C98970
74930	GO TO CLOSE-FILES.	C98970
74990	END-PROC-AIE.	C98970
75000	PROC-66-1.	C98970
75010	MOVE J-UY-66-1 TO JOAY.	C98970
75020	PERFORM CHECK-IN-IRAN THRU END-CHECK-IN-IRAN.	C98970
75030	IF IN-IRAN IS EQUAL TO 1 GO TO END-PROC-66-1.	C98970
75040	MOVE WUC-66-1 TO WUC-TEMP.	C98970
75050	PERFORM PROC-WUC THRU END-PROC-WUC.	C98970
75060	IF WUC-TYPE IS EQUAL TO 1 GO TO PROC-66-1-0.	C98970
75070	IF WUC-TYPE IS NOT EQUAL TO 2 GO TO END-PROC-66-1.	C98970
75100	MOVE 1 TO KNT.	C98970
75110	IF POS-TABLE-4 IS EQUAL TO ZERO GO TO PROC-66-1-0.	C98970
75120	PROC-66-1-H.	C98970
75130	IF WUC-TEMP IS EQUAL TO TABLE-4-WUC [KNT] AND WUC-66-1 IS	C98970
75140	EQUAL TO TABLE-4-WUC [KNT] AND TABLE-4-HMC [KNT] IS	C98970
75145	EQUAL TO HMC-66-1 THEN GO TO PROC-66-1-HMC.	C98970
75150	ADD 1 TO KNT.	C98970
75160	IF KNT IS GREATER THAN POS-TABLE-4 GO TO PROC-66-1-0.	C98970
75170	GO TO PROC-66-1-H.	C98970
75200	PROC-66-1-0.	C98970
75210	MOVE KNT TO POS-TABLE-4.	C98970
75215	IF POS-TABLE-4 IS GREATER THAN MAX-TAB-4 MOVE POS-TABLE-4	C98970
75216	TO MAX-TAB-4.	C98970
75220	IF POS-TABLE-4 IS GREATER THAN TABLE-SIZE GO TO	C98970
75230	PROC-66-1-ERR-1.	C98970
75240	MOVE WUC-TEMP TO TABLE-4-WUC [KNT].	C98970
75250	MOVE WUC-66-1 TO TABLE-4-WUC [KNT].	C98970
75255	MOVE HMC-66-1 TO TABLE-4-HMC [KNT].	C98970
75260	IF SERIES-TYPE-4 IS EQUAL TO SPACE MOVE SERIES-66-1 TO	C98970
75270	SERIES-TYPE-4.	C98970



75440	PROC-66-1-HMC.	C98970
75450	ADD UNITS-66-1 TO TABLE-4-UNITS [KNT].	C98970
75460	ADD LABOR-66-1 TO TABLE-4-MHRS [KNT].	C98970
75500	PROC-66-1-G.	C98970
75510	MOVE 1 TO KNT.	C98970
75520	IF POS-TABLE-3 IS EQUAL TO ZERO GO TO PROC-66-1-H.	C98970
75530	PROC-66-1-J.	C98970
75540	IF WUC-TEMP IS EQUAL TO TABLE-3-WUC [KNT] GO TO PROC-66-1-K.	C98970
75550	ADD 1 TO KNT.	C98970
75560	IF KNT IS GREATER THAN POS-TABLE-3 GO TO PROC-66-1-H.	C98970
75570	GO TO PROC-66-1-J.	C98970
75600	PROC-66-1-H.	C98970
75610	MOVE KNT TO POS-TABLE-3.	C98970
75614	IF POS-TABLE-3 IS GREATER THAN MAX-TAB-3 MOVE POS-TABLE-3	C98970
75615	TO MAX-TAB-3.	C98970
75620	IF POS-TABLE-3 IS GREATER THAN TABLE-SIZE GO TO	C98970
75630	PROC-66-1-ERR-3.	C98970
75640	MOVE WUC-TEMP TO TABLE-3-WUC [KNT].	C98970
75650	IF SERIES-TYPE-3 IS EQUAL TO SPACE THEN MOVE SERIES-66-1	C98970
75660	TO SERIES-TYPE-3.	C98970
75700	PROC-66-1-K.	C98970
75710	ADD UNITS-66-1 TO TABLE-3-UNITS [KNT].	C98970
75720	ADD LABOR-66-1 TO TABLE-3-LABOR [KNT].	C98970
75730	MOVE ZERO TO ATC-INDEX.	C98970
75735	PROC-66-1-K-L.	C98970
75740	ADD 1 TO ATC-INDEX.	C98970
75745	IF ATC-INDEX IS EQUAL TO LIST-ATC [ATC-INDEX]	C98970
75750	GO TO PROC-66-1-L.	C98970
75755	IF ATC-INDEX IS LESS THAN NUM-ATC GO TO PROC-66-1-K-L.	C98970
75760	GO TO END-PROC-66-1.	C98970
75770	PROC-66-1-L.	C98970
75780	ADD UNITS-66-1 TO TABLE-3-UNITS-ATC [KNT].	C98970
75790	GO TO END-PROC-66-1.	C98970
75900	PROC-66-1-LMR-1.	C98970
75910	DISPLAY : TABLE-SIZE EXCEEDED IN TABLE 4 : UPON CONSOLE.	C98970
75920	GO TO CLOSE-FILES.	C98970
75960	PROC-66-1-LMR-3.	C98970
75970	DISPLAY : TABLE-SIZE EXCEEDED IN TABLE 3 : UPON CONSOLE.	C98970
75980	GO TO CLOSE-FILES.	C98970
75990	END-PROC-66-1. EXIT.	C98970
76000	READ-65-110.	C98970
76010	IF FILE-DATA-1 IS EQUAL TO ZERO, GO TO END-READ-65-110.	C98970
76020	READ IN-FILE-65-110, AT END GO TO READ-65-110-A.	C98970
76030	IF SER-NO-65-110 EQUAL TO EOF-S-N GO TO READ-65-110-A.	C98970
76040	GO TO END-READ-65-110.	C98970
76050	READ-65-110-A.	C98970
76060	MOVE ZERO TO FILE-DATA [1].	C98970
76070	END-READ-65-110. EXIT.	C98970
76100	READ-IRAN.	C98970
76110	IF FILE-DATA-2 IS EQUAL TO ZERO, GO TO END-READ-IRAN.	C98970
76120	READ IN-FILE-IRAN, AT END GO TO READ-IRAN-A.	C98970
76130	IF SER-NO-IRAN EQUAL TO EOF-S-N GO TO READ-IRAN-A.	C98970
76140	GO TO END-READ-IRAN.	C98970
76150	READ-IRAN-A.	C98970
76160	MOVE ZERO TO FILE-DATA [2].	C98970
76170	END-READ-IRAN. EXIT.	C98970
76200	READ-AIE.	C98970
76210	IF FILE-DATA-3 IS EQUAL TO ZERO, GO TO END-READ-IRAN.	C98970
76220	READ IN-FILE-AIE, AT END GO TO READ-AIE-A.	C98970
76230	IF SER-NO-AIE EQUAL TO EOF-S-N GO TO READ-AIE-A.	C98970
76240	GO TO END-READ-AIE.	C98970
76250	READ-AIE-A.	C98970
76260	MOVE ZERO TO FILE-DATA [3].	C98970
76270	END-READ-AIE. EXIT.	C98970
76300	READ-66-1.	C98970
76310	IF FILE-DATA-4 IS EQUAL TO ZERO, GO TO END-READ-66-1.	C98970
76320	READ IN-FILE-66-1, AT END GO TO READ-66-1-A.	C98970
76330	IF SER-NO-66-1 EQUAL TO EOF-S-N GO TO READ-66-1-A.	C98970
76340	GO TO END-READ-66-1.	C98970
76350	READ-66-1-A.	C98970
76360	MOVE ZERO TO FILE-DATA [4].	C98970
76370	END-READ-66-1. EXIT.	C98970
77000	WHITE-BANK.	C98970
77021	IF REC-65-110-TYPE-1-ONLY IS EQUAL TO SPACE GO TO	C98970
77022	WHITE-BANK-TYPE-2.	C98970
77030	NOTE WHITE TYPE-1 RECORD.	C98970
77040	MOVE CUR-S-N TO SER-NO-TYPE-1.	C98970
77050	MOVE CUR-WEEK TO WEEK-NO-TYPE-1.	C98970
77060	WRITE OUT-REC FROM REC-TYPE-1.	C98970
77070	ADD 1 TO RECORDS-PASS.	C98970
77100	WRITE-BANK-TYPE-2.	C98970
77120	IF CUR-A-WEEK-2 IS EQUAL TO ZERO GO TO	C98970
77130	WHITE-BANK-TYPE-3.	C98970
77140	MOVE CUR-S-N TO SER-NO-TYPE-2.	C98970
77150	MOVE CUR-WEEK TO WEEK-NO-TYPE-2.	C98970
77160	WRITE OUT-REC FROM REC-TYPE-2.	C98970
77170	ADD 1 TO RECORDS-PASS.	C98970

77200	WRITE-BANK-TYPE-3.	C98970
77220	IF REC-65-110-TYPE-1-ONLY IS EQUAL TO SPACE AND	C98970
77230	UPTA-WEEK-3 IS EQUAL TO ZERO AND	C98970
77231	DATA-WEEK-4 IS EQUAL TO ZERO THEN GO TO WRITE-BANK-TYPE-4.	C98970
77240	IF POS-TABLE-3 IS EQUAL TO ZERO GO TO WRITE-BANK-TYPE-4.	C98970
77250	MOVE CUN-S-N TO SER-NO-TYPE-3.	C98970
77260	MOVE CUN-WEEK TO WEEK-NO-TYPE-3.	C98970
77270	MOVE 1 TO KNT.	C98970
77280	WRITE-BANK-A.	C98970
77290	MOVE TABLE-3-WUC [KNT] TO WUC-TYPE-3.	C98970
77300	MOVE TABLE-3-DATAA [KNT] TO DATA-TYPE-3A.	C98970
77330	WRITE OUT-REC FROM REC-TYPE-3.	C98970
77340	ADD 1 TO RECORDS-PASS.	C98970
77350	ADD 1 TO KNT.	C98970
77360	IF KNT IS GREATER THAN POS-TABLE-3 GO TO WRITE-BANK-TYPE-4.	C98970
77370	GO TO WRITE-BANK-A.	C98970
77400	WRITE-BANK-TYPE-4.	C98970
77420	IF DATA-WEEK-4 IS EQUAL TO ZERO GO TO END-WRITE-BANK.	C98970
77440	IF POS-TABLE-4 IS EQUAL TO ZERO GO TO END-WRITE-BANK.	C98970
77450	MOVE CUN-S-N TO SER-NO-TYPE-4.	C98970
77460	MOVE CUN-WEEK TO WEEK-NO-TYPE-4.	C98970
77490	MOVE 1 TO KNT.	C98970
77500	WRITE-BANK-B.	C98970
77510	MOVE TABLE-4-ROW [KNT] TO DATA-TYPE-4.	C98970
77520	WRITE OUT-REC FROM REC-TYPE-4.	C98970
77530	ADD 1 TO RECORDS-PASS.	C98970
77540	ADD 1 TO KNT.	C98970
77550	IF KNT IS GREATER THAN POS-TABLE-4 GO TO END-WRITE-BANK.	C98970
77560	GO TO WRITE-BANK-B.	C98970
77700	END-WRITE-BANK. EXIT.	C98970
78000	INIT-SN-WK.	C98970
78020	INIT-65-110.	C98970
78021	PERFORM READ-65-110 THRU END-READ-65-110.	C98970
78022	IF SER-NO-65-110 IS LESS THAN FIRST-A-C GO TO INIT-65-110.	C98970
78040	INIT-IRAN.	C98970
78041	PERFORM READ-IRAN THRU END-READ-IRAN.	C98970
78042	IF SER-NO-IRAN IS LESS THAN FIRST-A-C GO TO INIT-IRAN.	C98970
78060	INIT-AIE.	C98970
78062	PERFORM READ-AIE THRU END-READ-AIE.	C98970
78063	IF SER-NO-AIE IS LESS THAN FIRST-A-C GO TO INIT-AIE.	C98970
78080	INIT-66-1.	C98970
78081	PERFORM READ-66-1 THRU END-READ-66-1.	C98970
78082	IF SER-NO-66-1 IS LESS THAN FIRST-A-C THEN GO TO INIT-66-1.	C98970
78100	NOTE STORE SERIAL NUMBER, WEEK NUMBER INTO KEYS.	C98970
78110	MOVE SER-NO-65-110 TO SER-NO [1].	C98970
78120	COMPUTE WEEK-NO [1] > [J-DAY-65-110 < 3] / 7 < 1.	C98970
78130	MOVE SER-NO-IRAN TO SER-NO [2].	C98970
78140	COMPUTE WEEK-NO [2] > [IRAN-START-DAY < 3] / 7 < 1.	C98970
78150	MOVE SER-NO-AIE TO SER-NO [3].	C98970
78160	COMPUTE WEEK-NO [3] > [J-DAY-AIE < 3] / 7 < 1.	C98970
78170	MOVE SER-NO-66-1 TO SER-NO [4].	C98970
78180	COMPUTE WEEK-NO [4] > [J-DAY-66-1 < 3] / 7 < 1.	C98970
78190	END-INIT-SN-WK. EXIT.	C98970
78200	START-BANK.	C98970
78220	START-BANK-A.	C98970
78230	PERFORM DATA-AVAIL THRU END-DATA-AVAIL.	C98970
78240	IF CUN-WEEK GREATER THAN LAST-WEEK GO TO END-START-BANK.	C98970
78250	IF DATA-AVAIL-CODE EQUAL TO ZERO GO TO START-BANK-D.	C98970
78260	IF DATA-AVAIL-CODE EQUAL TO 2 GO TO START-BANK-B.	C98970
78270	IF DATA-AVAIL-CODE EQUAL TO 4 GO TO START-BANK-D.	C98970
78280	IF DATA-AVAIL-CODE EQUAL TO 6 GO TO START-BANK-B.	C98970
78281	IF DATA-WEEK-1 IS EQUAL TO ZERO GO TO START-BANK-1.	C98970
78282	IF DATA-WEEK-4 IS EQUAL TO ZERO GO TO START-BANK-0.	C98970
78290	GO TO END-START-BANK.	C98970
78300	NOTL IRAN DATA AVAILABLE.	C98970
78310	START-BANK-B.	C98970
78320	PERFORM RESET-IRAN THRU END-RESET.	C98970
78330	PERFORM PROC-IRAN THRU END-PROC-IRAN.	C98970
78340	MOVE ZERO TO NO-WEEK-PROC.	C98970
78350	PERFORM READ-IRAN THRU END-READ-IRAN.	C98970
78360	IF FILE-DATA-2 EQUAL TO ZERO GO TO START-BANK-C.	C98970
78370	MOVE SER-NO-IRAN TO SER-NO [2].	C98970
78380	COMPUTE WEEK-NO [2] > [IRAN-START-DAY < 3] / 7 < 1.	C98970
78390	GO TO START-BANK-A.	C98970
78400	START-BANK-C.	C98970
78410	MOVE LOI-S-N TO SER-NO [2].	C98970
78420	MOVE LOI-JDAY TO WEEK-NO [2].	C98970
78430	GO TO START-BANK-A.	C98970
78440	START-BANK-D.	C98970
78450	ADD ONE TO CUN-WEEK.	C98970
78460	ADD ONE TO NO-WEEK-PROC.	C98970
78470	IF DATA-AVAIL-CODE EQUAL TO ZERO GO TO START-BANK-A.	C98970
78480	START-BANK-E.	C98970
78490	PERFORM READ-AIE THRU END-READ-AIE.	C98970
78500	IF FILE-DATA-3 EQUAL TO ZERO GO TO START-BANK-H.	C98970
78510	IF SER-NO-AIE NOT EQUAL TO CUN-S-N GO TO START-BANK-B.	C98970
78520	COMPUTE WEEK-NO-COMP > [J-DAY-AIE < 3] / 7 < 1.	C98970

78530	IF WEEK-NO-COMP LESS THAN CUR-WEEK GO TO START-BANK-E,	C98970
78540	START-BANK-F,	C98970
78550	MOVE WEEK-NO-COMP TO WEEK-NO [3],	C98970
78560	GO TO START-BANK-A,	C98970
78570	START-BANK-U,	C98970
78580	MOVE SER-NO-A1E TO SER-NO [3],	C98970
78585	COMPUTE WEEK-NO-COMP > [J-DAY-A1E < 3] / 7 < 1,	C98970
78590	GO TO START-BANK-F,	C98970
78600	START-BANK-H,	C98970
78610	MOVE EOF-S-N TO SER-NO [3],	C98970
78620	MOVE EOF-JDAY TO WEEK-NO [3],	C98970
78630	GO TO START-BANK-A,	C98970
78640	START-BANK-I,	C98970
78641	NOTE UPSPACE 66-1,	C98970
78642	ADD ONE TO CUR-WEEK,	C98970
78643	ADD ONE TO NO-WEEK-PROC,	C98970
78645	START-BANK-J,	C98970
78646	PERFORM READ-66-1 THRU END-READ-66-1,	C98970
78647	IF FILE-DATA-4 EQUAL TO ZERO GO TO START-BANK-K,	C98970
78648	IF SER-NO-66-1 IS NOT EQUAL TO CUR-S-N GO TO START-BANK-L,	C98970
78649	COMPUTE WEEK-NO-COMP > [J-DAY-66-1 < 3] / 7 < 1,	C98970
78650	IF WEEK-NO-COMP LESS THAN CUR-WEEK GO TO START-BANK-J,	C98970
78651	START-BANK-M,	C98970
78652	MOVE WEEK-NO-COMP TO WEEK-NO [4],	C98970
78653	GO TO START-BANK-A,	C98970
78654	START-BANK-L,	C98970
78655	MOVE SER-NO-66-1 TO SER-NO [4],	C98970
78656	COMPUTE WEEK-NO-COMP > [J-DAY-66-1 < 3] / 7 < 1,	C98970
78657	GO TO START-BANK-M,	C98970
78658	START-BANK-K,	C98970
78659	MOVE EOF-S-N TO SER-NO [4],	C98970
78660	MOVE EOF-JDAY TO WEEK-NO [4],	C98970
78661	GO TO START-BANK-A,	C98970
78670	START-BANK-O,	C98970
78671	NOTE UPSPACE 65-110,	C98970
78672	ADD ONE TO CUR-WEEK,	C98970
78673	ADD ONE TO NO-WEEK-PROC,	C98970
78675	START-BANK-N,	C98970
78676	PERFORM READ-65-110 THRU END-READ-65-110,	C98970
78677	IF FILE-DATA-3 EQUAL TO ZERO GO TO START-BANK-P,	C98970
78678	IF SER-NO-65-110 IS NOT EQUAL TO CUR-S-N GO TO START-BANK-Q,	C98970
78679	COMPUTE WEEK-NO-COMP > [J-DAY-65-110 < 3] / 7 < 1,	C98970
78680	IF WEEK-NO-COMP LESS THAN CUR-WEEK GO TO START-BANK-R,	C98970
78681	START-BANK-S,	C98970
78682	MOVE WEEK-NO-COMP TO WEEK-NO [1],	C98970
78683	GO TO START-BANK-A,	C98970
78684	START-BANK-U,	C98970
78685	MOVE SER-NO-65-110 TO SER-NO [1],	C98970
78686	COMPUTE WEEK-NO-COMP > [J-DAY-65-110 < 3] / 7 < 1,	C98970
78687	GO TO START-BANK-S,	C98970
78688	START-BANK-P,	C98970
78689	MOVE EOF-S-N TO SER-NO [1],	C98970
78690	MOVE EOF-JDAY TO WEEK-NO [1],	C98970
78691	GO TO START-BANK-A,	C98970
78699	END-START-BANK, EXIT,	C98970
78700	FILES-EOF,	C98970
78720	FILES-EOF-A,	C98970
78730	COMPUTE ALL-EOF > FILE-DATA [1] < FILE-DATA [2]	C98970
78740	< FILE-DATA [3] < FILE-DATA [4],	C98970
78750	IF ALL-EOF EQUAL TO ZERO	C98970
78760	GO TO END-FILES-EOF,	C98970
78770	FILES-EOF-H,	C98970
78780	PERFORM ST-SN-WK THRU END-ST-SN-WK,	C98970
78790	COMPUTE FILE-NO > FILE-LOW-DATA,	C98970
78800	IF SER-NO [2] GREATER THAN SER-NO [FILE-NO]	C98970
78810	GO TO FILES-EOF-C,	C98970
78820	MOVE WEEK-NO [FILE-NO] TO TEMP,	C98970
78821	IF TEMP IS GREATER THAN LAST-WEEK	C98970
78830	GO TO FILES-EOF-C,	C98970
78840	IF CUR-S-N LESS THAN SER-NO [FILE-NO]	C98970
78850	GO TO END-FILES-EOF,	C98970
78860	FILES-EOF-C,	C98970
78870	GO TO FILES-EOF-O, FILES-EOF-E, FILES-EOF-F, FILES-EOF-G,	C98970
78880	DEPENDING ON FILE-LOW-DATA,	C98970
78890	FILES-EOF-O,	C98970
78900	PERFORM READ-65-110 THRU END-READ-65-110,	C98970
78910	IF FILE-DATA-1 EQUAL TO ZERO GO TO FILES-EOF-A,	C98970
78920	IF SER-NO-65-110 LESS THAN CUR-S-N GO TO FILES-EOF-O,	C98970
78930	MOVE SER-NO-65-110 TO SER-NO [1],	C98970
78940	COMPUTE WEEK-NO-COMP > [J-DAY-65-110 < 3] / 7 < 1,	C98970
78950	MOVE WEEK-NO-COMP TO WEEK-NO [1],	C98970
78960	GO TO FILES-EOF-R,	C98970
78970	FILES-EOF-E,	C98970
78980	PERFORM READ-IRAN THRU END-READ-IRAN,	C98970
78990	IF FILE-DATA-2 EQUAL TO ZERO GO TO FILES-EOF-A,	C98970
79000	IF SER-NO-IRAN LESS THAN CUR-S-N GO TO FILES-EOF-E,	C98970
79010	MOVE SER-NO-IRAN TO SER-NO [2],	C98970

79020	COMPUTE WEEK-NO-COMP > [IRAN-START-DAY < 3] / 7 < 1.	C98970
79030	MOVE WEEK-NO-COMP TO WEEK-NO [2].	C98970
79040	GO TO FILES-EOF-B.	C98970
79050	FILES-EOF-F.	C98970
79060	PERFORM READ-AIE THRU END-READ-AIE.	C98970
79070	IF FILE-DATA-3 EQUAL TO ZERO GO TO FILES-EOF-A.	C98970
79080	IF SER-NO-AIE LESS THAN CUR-S-N GO TO FILES-EOF-F.	C98970
79090	MOVE SER-NO-AIE TO SER-NO [3].	C98970
79100	COMPUTE WEEK-NO-COMP > [J-DAY-AIE < 3] / 7 < 1.	C98970
79110	MOVE WEEK-NO-COMP TO WEEK-NO [3].	C98970
79120	GO TO FILES-EOF-B.	C98970
79130	FILES-EOF-G.	C98970
79140	PERFORM READ-66-1 THRU END-READ-66-1.	C98970
79150	IF FILE-DATA-4 EQUAL TO ZERO GO TO FILES-EOF-A.	C98970
79160	IF SER-NO-66-1 LESS THAN CUR-S-N GO TO FILES-EOF-F.	C98970
79170	MOVE SER-NO-66-1 TO SER-NO [4].	C98970
79180	COMPUTE WEEK-NO-COMP > [J-DAY-66-1 < 3] / 7 < 1.	C98970
79190	MOVE WEEK-NO-COMP TO WEEK-NO [4].	C98970
79200	GO TO FILES-EOF-B.	C98970
79210	END-FILES-EOF. EXIT.	C98970
79500	DATA-AVAIL.	C98970
79510	MOVE ZERO TO DATA-AVAIL-CODE.	C98970
79520	MOVE ONE TO FILE-NO.	C98970
79530	DATA-AVAIL-A.	C98970
79540	MOVE ZERO TO DATA-WEEK [FILE-NO].	C98970
79550	IF SER-NO [FILE-NO] NOT EQUAL TO CUR-S-N.	C98970
79560	GO TO DATA-AVAIL-B.	C98970
79570	MOVE WEEK-NO [FILE-NO] TO TEMP.	C98970
79571	IF TEMP IS NOT EQUAL TO CUR-WEEK.	C98970
79580	GO TO DATA-AVAIL-B.	C98970
79590	MOVE ONE TO DATA-WEEK [FILE-NO].	C98970
79600	COMPUTE KNR > 2 * [FILE-NO - 1].	C98970
79610	COMPUTE DATA-AVAIL-CODE > DATA-AVAIL-CODE < KNR.	C98970
79620	DATA-AVAIL-B.	C98970
79630	ADD 1 TO FILE-NO.	C98970
79640	IF FILE-NO LESS THAN 5. GO TO DATA-AVAIL-A.	C98970
79650	END-DATA-AVAIL.	C98970
79660	EXIT.	C98970
80000	RESET-SER-NO.	C98970
80010	MOVE NINE-X1 TO SERIES-TYPE-1.	C98970
80020	MOVE NINE-X1 TO SERIES-TYPE-2.	C98970
80030	MOVE NINE-X1 TO SERIES-TYPE-3.	C98970
80040	MOVE NINE-X1 TO SERIES-TYPE-4.	C98970
80050	NOTE THIS SETS SERIES TO 9 IN ALL OUTPUT FILES.	C98970
80200	RESET-WCFK.	C98970
80221	MOVE ZERO TO POS-TABLE-3.	C98970
80222	MOVE ZERO TO POS-TABLE-4.	C98970
80230	MOVE NINE-94 TO FLT-TIME-TYPE-1.	C98970
80240	MOVE NINE-94 TO SORTIES-TYPE-1.	C98970
80250	MOVE NINE-94 TO LANDINGS-TYPE-1.	C98970
80260	MOVE NINE-93 TO IRAN-VIS-NO-TYPE-2.	C98970
80270	MOVE NINE-93 TO IRAN-CODE-TYPE-2.	C98970
80280	MOVE NINE-94 TO IRAN-START-DAY-TYPE-2.	C98970
80290	MOVE NINE-94 TO IRAN-END-DAY-TYPE-2.	C98970
80300	MOVE SPACE TO REC-65-110-TYPE-1-ONLY.	C98970
80400	MOVE 1 TO KNT.	C98970
80410	RESET-TABLE-3.	C98970
80420	MOVE NINE-X5 TO TABLE-3-WUC [KNT].	C98970
80430	MOVE NINE-93 TO TABLE-3-UNITS [KNT].	C98970
80440	MOVE NINE-94 TO TABLE-3-LABOR [KNT].	C98970
80450	MOVE NINE-94 TO TABLE-3-NORM [KNT].	C98970
80455	MOVE NINE-93 TO TABLE-3-UNITS-ATC [KNT].	C98970
80460	MOVE NINE-94 TO TABLE-3-MORS [KNT].	C98970
80470	ADD 1 TO KNT.	C98970
80480	IF KNT IS LESS THAN TAB-SIZ-1 GO TO RESET-TABLE-3.	C98970
80490	MOVE 1 TO KNT.	C98970
80500	RESET-TABLE-4.	C98970
80510	MOVE NINE-X5 TO TABLE-4-WUC [KNT].	C98970
80520	MOVE NINE-X1 TO TABLE-4-WDC [KNT].	C98970
80620	MOVE NINE-X3 TO TABLE-4-HMC [KNT].	C98970
80630	MOVE NINE-93 TO TABLE-4-UNITS [KNT].	C98970
80640	MOVE NINE-94 TO TABLE-4-MHRS [KNT].	C98970
80680	ADD 1 TO KNT.	C98970
80690	IF KNT IS LESS THAN TAB-SIZ-1 GO TO RESET-TABLE-4.	C98970
80800	RESET-AIE.	C98970
80810	MOVE 1 TO KNT.	C98970
80820	RESET-AIE-1.	C98970
80830	MOVE ZERO TO TABLE-3-AIE [KNT].	C98970
80831	MOVE SPACE TO TABLE-3-WUC [KNT].	C98970
80840	ADD 1 TO KNT.	C98970
80850	IF KNT IS LESS THAN TAB-SIZ-1 GO TO RESET-AIE-1.	C98970
80870	MOVE SPACE TO SERIES-TYPE-3.	C98970
80890	GO TO END-RESET.	C98970
81000	RESET-65-110.	C98970
81010	MOVE ZERO TO FLT-TIME-TYPE-1.	C98970
81020	MOVE ZERO TO SORTIES-TYPE-1.	C98970

81030	MOVE ZERO TO LANDINGS-TYPE-1.	C98970
81040	MOVE SPACE TO SERIES-TYPE-3.	C98970
81050	MOVE SPACE TO SERIES-TYPE-1.	C98970
81090	MOVE 1 TO KNT.	C98970
81100	SET-TABLE-3-65-110.	C98970
81110	MOVE SPACE TO TABLE-3-WUC [KNT].	C98970
81120	MOVE ZERO TO TABLE-3-UNITS [KNT].	C98970
81130	MOVE ZERO TO TABLE-3-LABOR [KNT].	C98970
81140	MOVE ZERO TO TABLE-3-NORM [KNT].	C98970
81150	MOVE ZERO TO TABLE-3-NORS [KNT].	C98970
81160	ADD . TO KNT.	C98970
81170	IF KNT IS LESS THAN TAB-SIZ-1 GO TO SET-TABLE-3-65-110.	C98970
81290	GO TO END-RESET.	C98970
81400	RESET-IRAN.	C98970
81410	MOVE NINE-93 TO IRAN-VIS-NO-TYPE-2.	C98970
81420	MOVE NINE-93 TO IRAN-CODE-TYPE-2.	C98970
81430	MOVE NINE-94 TO IRAN-START-DAY-TYPE-2.	C98970
81440	MOVE NINE-94 TO IRAN-END-DAY-TYPE-2.	C98970
81450	MOVE SPACE TO SERIES-TYPE-2.	C98970
81490	GO TO END-RESET.	C98970
81600	RESET-66-1.	C98970
81610	MOVE 1 TO KNT.	C98970
81620	SET-TABLE-4-66-1.	C98970
81630	MOVE SPACE TO TABLE-4-WUC [KNT].	C98970
81640	MOVE ZERO TO TABLE-3-UNITS [KNT].	C98970
81641	MOVE ZERO TO TABLE-3-LABOR [KNT].	C98970
81642	MOVE SPACE TO TABLE-3-WUC [KNT].	C98970
81643	MOVE ZERO TO TABLE-3-UNITS-ATC [KNT].	C98970
81650	MOVE SPACE TO TABLE-4-WDC [KNT].	C98970
81690	MOVE SPACE TO TABLE-4-HMC [KNT].	C98970
81700	MOVE ZERO TO TABLE-4-UNITS [KNT].	C98970
81710	MOVE ZERO TO TABLE-4-MHRS [KNT].	C98970
81740	ADD 1 TO KNT.	C98970
81750	IF KNT IS LESS THAN TAB-SIZ-1 GO TO SET-TABLE-4-66-1.	C98970
81780	MOVE SPACE TO SERIES-TYPE-4.	C98970
81790	END-RESET. EXIT.	C98970
86000	READ-WUC-LIST.	C98970
86010	MOVE ZERO TO KNB.	C98970
86020	READ-L-W-1.	C98970
86025	ADD . TO KNB.	C98970
86030	READ IN-FILE-WUC AT END GO TO END-READ-WUC-LIST.	C98970
86040	MOVE IN-REC-WUC TO LIST-WUC [KNB].	C98970
86060	IF KNB IS LESS THAN MAX-NUM-WUC GO TO READ-L-W-1.	C98970
86070	END-READ-WUC-LIST. EXIT.	C98970
87000	ST-SN-WK.	C98970
87020	MOVE EOF-S-N TO SN-TEMP.	C98970
87030	MOVE ONE TO FILE-NO.	C98970
87040	ST-SN-WK-A.	C98970
87048	MOVE FILE-DATA [FILE-NO] TO TEMP.	C98970
87050	IF TEMP IS EQUAL TO ZERO, GO TO ST-SN-WK-B.	C98970
87060	IF SER-NO [FILE-NO] GREATER THAN SN-TEMP, GO TO ST-SN-WK-B.	C98970
87070	MOVE FILE-NO TO FILE-LOW-DATA.	C98970
87080	MOVE SER-NO [FILE-NO] TO SN-TEMP.	C98970
87090	ST-SN-WK-B.	C98970
87100	ADD ONE TO FILE-NO.	C98970
87110	IF FILE-NO LESS THAN 5, GO TO ST-SN-WK-A.	C98970
87130	MOVE EOF-JDAY TO WEEK-NO-COMP.	C98970
87140	MOVE ONE TO FILE-NO.	C98970
87150	ST-SN-WK-D.	C98970
87160	MOVE FILE-DATA [FILE-NO] TO TEMP.	C98970
87161	IF TEMP IS EQUAL TO ZERO GO TO ST-SN-WK-E.	C98970
87170	IF SER-NO [FILE-NO] NOT EQUAL TO SN-TEMP, GO TO ST-SN-WK-E.	C98970
87180	MOVE WEEK-NO [FILE-NO] TO TEMP.	C98970
87181	IF TEMP IS GREATER THAN WEEK-NO-COMP, GO TO	C98970
87190	ST-SN-WK-E.	C98970
87200	MOVE FILE-NO TO FILE-LOW-DATA.	C98970
87210	MOVE WEEK-NO [FILE-NO] TO WEEK-NO-COMP.	C98970
87220	ST-SN-WK-E.	C98970
87230	ADD ONE TO FILE-NO.	C98970
87240	IF FILE-NO LESS THAN 5, GO TO ST-SN-WK-D.	C98970
87250	END-ST-SN-WK. EXIT.	C98970
88000	SN-WK-65-110.	C98970
88030	SN-WK-65-110-A.	C98970
88040	PERFORM PROC-65-110 THRU END-PROC-65-110.	C98970
88050	PERFORM REAU-65-110 THRU END-READ-65-110.	C98970
88060	IF FILE-DATA-1 IS EQUAL TO ZERO, GO TO SN-WK-65-110-C.	C98970
88070	COMPUTE WEEK-NO-COMP > [J-DAY-65-110 < 3] / 7 < 1.	C98970
88080	IF SER-NO-65-110 NOT EQUAL TO CUR-S-N, GO TO SN-WK-65-110-B.	C98970
88090	IF WEEK-NO-COMP NOT EQUAL TO CUR-WEEK, GO TO SN-WK-65-110-B.	C98970
88100	GO TO SN-WK-65-110-A.	C98970
88110	SN-WK-65-110-B.	C98970
88120	MOVE SER-NO-65-110 TO SER-NO [1].	C98970
88130	MOVE WEEK-NO-COMP TO WEEK-NO [1].	C98970
88140	GO TO END-SN-WK-65-110.	C98970
88150	SN-WK-65-110-C.	C98970
88160	MOVE EOF-S-N TO SER-NO [1].	C98970
88170	MOVE EOF-JDAY TO WEEK-NO [1].	C98970

88180	END-SN-WK-65-110.	C98970
88190	EXIT.	C98970
88200	SN-WK-IRAN.	C98970
88230	SN-WK-IRAN-A.	C98970
88240	PERFORM PROC-IRAN THRU END-PROC-IRAN.	C98970
88250	PERFORM READ-IRAN THRU END-READ-IRAN.	C98970
88260	IF FILE-0ATA-2 IS EQUAL TO ZERO, GO TO SN-WK-IRAN-C.	C98970
88270	COMPUTE WEEK-NO-COMP > [IRAN-START-DAY < 3] / 7 < 1.	C98970
88280	IF SER-NO-IRAN NOT EQUAL TO CUR-S-N, GO TO SN-WK-IRAN-B.	C98970
88290	IF WEEK-NO-COMP NOT EQUAL TO CUR-WEEK, GO TO SN-WK-IRAN-B.	C98970
88300	GO TO SN-WK-IRAN-A.	C98970
88310	SN-WK-IRAN-B.	C98970
88320	MOVE SER-NO-IRAN TO SER-NO [2].	C98970
88330	MOVE WEEK-NO-COMP TO WEEK-NO [2].	C98970
88340	GO TO END-SN-WK-IRAN.	C98970
88350	SN-WK-IRAN-C.	C98970
88360	MOVE EOF-S-N TO SER-NO [2].	C98970
88370	MOVE EOF-JDAY TO WEEK-NO [2].	C98970
88380	END-SN-WK-IRAN.	C98970
88390	EXIT.	C98970
88400	SN-WK-AIE.	C98970
88430	SN-WK-AIE-A.	C98970
88440	PERFORM PROC-AIE THRU END-PROC-AIE.	C98970
88450	PERFORM READ-AIE THRU END-READ-AIE.	C98970
88460	IF FILE-0ATA-3 IS EQUAL TO ZERO, GO TO SN-WK-AIE-C.	C98970
88470	COMPUTE WEEK-NO-COMP > [J-DAY-AIE < 3] / 7 < 1.	C98970
88480	IF SER-NO-AIE NOT EQUAL TO CUR-S-N, GO TO SN-WK-AIE-B.	C98970
88490	IF WEEK-NO-COMP NOT EQUAL TO CUR-WEEK, GO TO SN-WK-AIE-B.	C98970
88500	GO TO SN-WK-AIE-A.	C98970
88510	SN-WK-AIE-B.	C98970
88520	MOVE SER-NO-AIE TO SER-NO [3].	C98970
88530	MOVE WEEK-NO-COMP TO WEEK-NO [3].	C98970
88540	GO TO END-SN-WK-AIE.	C98970
88550	SN-WK-AIE-C.	C98970
88560	MOVE EOF-S-N TO SER-NO [3].	C98970
88570	MOVE EOF-JDAY TO WEEK-NO [3].	C98970
88580	END-SN-WK-AIE.	C98970
88590	EXIT.	C98970
88600	SN-WK-66-1.	C98970
88630	SN-WK-66-1-A.	C98970
88640	PERFORM PROC-66-1 THRU END-PROC-66-1.	C98970
88650	PERFORM READ-66-1 THRU END-READ-66-1.	C98970
88660	IF FILE-0ATA-4 IS EQUAL TO ZERO, GO TO SN-WK-66-1-C.	C98970
88670	COMPUTE WEEK-NO-COMP > [J-DAY-66-1 < 3] / 7 < 1.	C98970
88680	IF SER-NO-66-1 NOT EQUAL TO CUR-S-N, GO TO SN-WK-66-1-B.	C98970
88690	IF WEEK-NO-COMP NOT EQUAL TO CUR-WEEK, GO TO SN-WK-66-1-B.	C98970
88700	GO TO SN-WK-66-1-A.	C98970
88710	SN-WK-66-1-B.	C98970
88720	MOVE SER-NO-66-1 TO SER-NO [4].	C98970
88730	MOVE WEEK-NO-COMP TO WEEK-NO [4].	C98970
88740	GO TO END-SN-WK-66-1.	C98970
88750	SN-WK-66-1-C.	C98970
88760	MOVE EOF-S-N TO SER-NO [4].	C98970
88770	MOVE EOF-JDAY TO WEEK-NO [4].	C98970
88780	END-SN-WK-66-1.	C98970
88790	EXIT.	C98970
90000	READ-0ATA-IN-FILE.	C98970
90010	READ 0ATA-IN-FILE INTO 0ATA-IN-A.	C98970
90020	AT END GO TO END-ROIF.	C98970
90030	READ 0ATA-IN-FILE INTO 0ATA-IN-B.	C98970
90040	AT END GO TO END-ROIF.	C98970
90050	MOVE ZERO TO KNT.	C98970
90060	MOVE MISSION-IN TO MISSION-TYPE-1, MISSION-TYPE-2	C98970
90070	MISSION-TYPE-3, MISSION-TYPE-4.	C98970
90080	MOVE DESIGN-IN TO DESIGN-TYPE-1, DESIGN-TYPE-2,	C98970
90090	DESIGN-TYPE-3, DESIGN-TYPE-4.	C98970
90100	ROIF-A.	C98970
90110	READ 0ATA-IN-FILE INTO 0ATA-IN-C.	C98970
90120	AT END GO TO END-ROIF.	C98970
90130	ADD 1 TO KNT.	C98970
90140	MOVE X-CODE TO LIST-ATC [KNT].	C98970
90150	IF KNT IS LESS THAN NUM-ATC GO TO ROIF-A.	C98970
90200	READ 0ATA-IN-FILE INTO 0ATA-IN-D.	C98970
90210	AT END GO TO END-ROIF.	C98970
90220	MOVE ZERO TO KNT.	C98970
90300	ROIF-B.	C98970
90310	READ 0ATA-IN-FILE INTO 0ATA-IN-E.	C98970
90320	AT END GO TO END-ROIF.	C98970
90330	ADD 1 TO KNT.	C98970
90340	MOVE X-CODE TO NOR-CODE [KNT].	C98970
90350	IF KNT IS LESS THAN NUM-NCOOES GO TO ROIF-B.	C98970
90400	READ 0ATA-IN-FILE INTO 0ATA-IN-F.	C98970
90410	AT END GO TO END-ROIF.	C98970
90420	MOVE ZERO TO KNT.	C98970
90430	ROIF-C.	C98970
90440	READ 0ATA-IN-FILE INTO 0ATA-IN-G.	C98970
90450	AT END GO TO END-ROIF.	C98970

```

90460      ADD 1 TO KNT.                                C98970
90470      MOVE ENG-WUC-IN TO ENGINE-WUC [KNT].        C98970
90480      IF KNT IS LESS THAN NUM-ENG-WUC GO TO RDIF-C. C98970
90500      READ DATA-IN-FILE INTO DATA-IN-0.         C98970
90510      AT END GO TO END-RDIF.                      C98970
90520      MOVE ZEH0 TO KNT.                            C98970
90530      RDIF-D.                                       C98970
90540      READ DATA-IN-FILE INTO DATA-IN-H.         C98970
90550      AT END GO TO END-RDIF.                      C98970
90560      ADD 1 TO KNT.                                C98970
90570      MOVE WUC-2DIG-IN TO WUC-POS-TYPE [KNT].    C98970
90580      MOVE FIRST-POSITION TO WUC-POS-START [KNT]. C98970
90590      MOVE LAST-POSITION TO WUC-POS-END [KNT].    C98970
90600      IF KNT IS LESS THAN NUM-WUC-GROUPS GO TO RDIF-D. C98970
90900      END-RDIF. EXIT.                             C98970
/*          PLACE COBOL SOURCE BEFORE THIS CARD
//CH0.TF6IN  DJ  *.SPACEX(CYL,[1,1])
00000      GET TFO:                                     WANG
010001 019999 REPLACE                                C98970
TF6 DT01 11 0202080                                'T
03 04 57000230 0 357 F106 150
3
P
R
S
17 9
A
B
C
D
F
G
H
E
K
M
N
P
R
S
T
V
W
7
23A
23B
23C
23D
23E
23G
23Z
22 2201
11 1 250
12 251 288
13 289 403
14 404 498
23 499 745
41 746 848
42 849 895
44 896 919
45 920 1024
46 1025 1167
47 1168 1196
49 1197 1216
51 1217 1258
52 1259 1308
55 1309 1316
63 1317 1326
65 1327 1384
71 1385 1430
74 1431 1983
75 1984 2166
93 2167 2188
97 2189 2201
*END
/*          PLACE TFG DATA BEFORE THIS CARD
//TPR.TU12  DU  DISP>[OLD,KEEP],VOL>SER>+F1,UNIT>T+F1 T12
//TPR.TU14  CJ  DISP>[OLD,KEEP],VOL>SER>+F3,UNIT>T+F3 T14
//TPR.TU15  CJ  DISP>[OLD,KEEP],VOL>SER>+F4,UNIT>T+F4 T15
//TPR.TU22  DO  DISP>[OLD,KEEP],VOL>SER>+F5,UNIT>T+F5 T22
//TPR.TU24  DO  DISP>[OLD,KEEP],VOL>SER>+F7,UNIT>T+F7 T24
//TPR.TU28  LJ  DISP>[OLD,KEEP],VOL>SER>+F8,UNIT>T+F8 T28
//TPR.TPRIN  FO  *.SPACEX(TRK,[1,1])
T/P DT01 10100802080
T/P TU22 19480502050
/*          PLACE COBOL SOURCE BEFORE THIS CARD

```

NUMBER OF ATC.

NUMBER OF NOR-NORM

NO ENGINE WUC

NUM WUC GROUPS, NUM WUC

## 6.5.5 SORT WUC FOR CONVERSION

```
//T9897A JOB 01:1 0 WANG 1,PRTY>02,TPRUN>HOLD
//C98978 EXEC C9601N,TIME>01,ACCT>D35323087
//CHG,TU23 LD DSN>P.9897551,DISP>(,PASS),SPACE>(CYL:[001:001])
//CHG,TF61N C) 0,SPACE>(CYL:[1:1])
00000 GET TFG WANG
010001 019999 REPLACE
TFG TU23 11 0202080
74AJ1 74AK1
74AK1 74AL1
74AKA 74ALA
74AM1 74AN1
74AN1 74AP1
74ANB 74APA
74ANC 74APB
74AND 74APC
74ANG 74APF
74ANH 74APG
74ANJ 74APH
74ANK 74APJ
74ANL 74APK
74ANM 74APL
74ANN 74APM
74ANQ 74APP
74ANS 74APR
74ANT 74APS
74ANU 74APT
74ANV 74APU
74ANW 74APV
74ANX 74APW
74ANY 74APX
74ANZ 74APY
74AN2 74AP2
74AN3 74AP2
74AN4 74AP3
74AN5 74AP4
74AN6 74AP5
74AN7 74AP6
74AN8 74AP7
74AP1 74A01
74A01 74AH1
74A0B 74AMB
74A0C 74ARC
74AH1 74AS1
74AS1 74AT1
74ASA 74A1A
74AT1 74AU1
74BC1 74BB1
74BCA 74BBB
74BD1 74BC1
74BG1 74BD1
74GE1 74HE1
74BM1 74HF1
74BJ1 74UG1
74BK1 74HM1
74BL1 74HJ1
74BM1 74BK1
74DMA 74BKA
74BMB 74BKB
74BN1 74BL1
74BP1 74BM1
74BPA 74BMA
74BPB 74BMB
74BQ1 74BN1
74BR1 74BP1
74BT1 74BQ1
74BU1 74BH1
74BUA 74BRA
74BUB 74BHB
74BV1 74BS1
74BW1 74BT1
74BX1 74BU1
74CM1 74BV1
74CN1 74BW1
74BZ1 74BX1
74BZA 74BXA
74CP1 74BY1
74CA1 74BZ1
74CAA 74BZA
74C01 74CA1
74C0A 74CAA
74C0B 74CAB
74C0C 74CAC
74C0D 74CAD
```

023-OUT  
1440 CDS  
C98978'T  
'T



74COE 74CAE  
 74CH1 74CC1  
 74CHA 74CCA  
 74CHB 74CCB  
 74CHC 74CCC  
 74CHD 74CCD  
 74CHE 74CCL  
 74CHF 74CCF  
 74CRG 74CCG  
 74CRH 74CCH  
 74CRJ 74CCJ  
 74CRK 74CCK  
 74CRL 74CCL  
 74CC1 74CD1  
 74CS1 74CF1  
 74CSA 74CFA  
 74CSB 74CFB  
 74CE1 74CG1  
 74CF1 74CH1  
 74CFA 74CHA  
 74CT1 74CJ1  
 74CTA 74CJA  
 74CTB 74CJB  
 74CTC 74CJC  
 74CTD 74CJD  
 74CTE 74CJE  
 74CG1 74DB1  
 74CH1 74DC1  
 74CHA 74DCA  
 74CHB 74DCB  
 74CHC 74DCC  
 74CHE 74DCD  
 74CHF 74DCE  
 74CK1 74DD1  
 74E00 74F00  
 74EB1 74FA0  
 74FF1 74FB1  
 74FE1 74FC1  
 74FEA 74FCA  
 74FEB 74FCB  
 74FEC 74FCC  
 74FED 74FCD  
 74FEE 74FCE  
 74FEF 74FCF  
 74FC1 74FD1  
 74FCA 74FDA  
 74FCB 74FDB  
 74FCC 74FDC  
 74FCD 74FDD  
 74FCE 74FDE  
 74FCF 74FDF  
 74FCG 74FDG  
 74FCH 74FDH  
 74FCJ 74FDJ  
 74FCK 74FDK  
 74FCL 74FDL  
 74FCM 74FDM  
 74FCN 74FDN  
 74FCP 74FDP  
 74FCQ 74FDQ  
 74FCR 74FDH  
 74FCS 74FDS  
 74FCT 74FDT  
 74FCU 74FDU  
 74FCV 74FDV  
 74FCW 74FDW  
 74FCX 74FDX  
 74FCY 74FDY  
 74FCZ 74FDZ  
 74FC2 74FD2  
 74FC3 74FD3  
 74FC4 74FD4  
 74FC5 74FD5  
 74FC6 74FD6  
 74FC7 74FD7  
 74FC8 74FD8  
 74FC9 74FD9  
 74FDA 74FEA  
 74FDB 74FEB  
 74FB1 74FF1  
 74FBA 74FFA  
 74FBB 74FFB  
 74FBC 74FFC  
 74FBD 74FFD  
 74FBE 74FFE  
 74FBF 74FFF  
 74FBG 74FFG

74FHH 74FFH  
 74FBJ 74FFJ  
 74FBK 74FFK  
 74FBL 74FFL  
 74FBM 74FFM  
 74EV1 74FG1  
 74EW1 74FH1  
 74EX1 74FJ1  
 74EU1 74FK1  
 74KM1 74KL1  
 74KB1 74KC1  
 74KBB 74KCB  
 74KC1 74KD1  
 74KDI 74KE1  
 74KDB 74KEB  
 74KDC 74KEC  
 74KE1 74KEF  
 74KEB 74KEB  
 74KEF 74KEF  
 74KFA 74KGA  
 74KFB 74KGB  
 74KFC 74KGC  
 74KFD 74KGD  
 74KFE 74KGE  
 74KFF 74KGF  
 74KFG 74KGG  
 74KFH 74KGH  
 74KFJ 74KGJ  
 74KFK 74KGG  
 74KFL 74KGL  
 74KG1 74KHM  
 74KMA 74KJA  
 74KP1 74KK1  
 74KQ1 74KL1  
 74KH1 74KM1  
 74KS1 74KN1  
 74KT1 74KP1  
 74KU1 74KQ1  
 74CEA 74CGA  
 74KV1 74KR1  
 74G00 74P00  
 74GA1 74PA1  
 74GU1 74PB1  
 74GD1 74PC1  
 74BF1 74PD1  
 74GF1 74PE1  
 74GG1 74PF1  
 74GGA 74PFA  
 74GH1 74PG1  
 74GJ1 74PH1  
 74GK1 74PJ1  
 74GL1 74PK1  
 74GM1 74PL1  
 74GP1 74PM1  
 74GQ1 74PN1  
 74GR1 74PP1  
 74GN1 74QA1  
 74GNA 74QAA

\*END

```

/*
//C9897H EXEC C 1603N,TIME>01,ACCT>035323007
//CHG,TU23 D7 DSN>+P.9897551,DISP>(OLD,PASS)
//CHG,TPR1N DL *.SPACE>(TRK,[1,1])
T/P TU23 101.0802080
/* PLACE T/P CONTROL CARDS BEFORE THIS CARD
//C9897D EXEC P9622P,W>010,TIME>01,ACCT>035323007
//CHG, SORTIN D7 DSN>+P.9897551,DISP>(OLD,DELETE),
// D7B>(LRECL>0000,BLKSIZE>1600),LABEL>(,NSL,RETPD>000)
//CHG, SORTOUT D7 DSN>+P.9897553,DISP>(,PASS),SPACE>(CTL,[001,001]),
// D7B>(LRECL>0000,BLKSIZE>1600)
//CHG, SYSIN C3 *.DCB>(BLKSIZE>0000,SPACE>(TRK,[1,1]))
SORT FIELDS>(002,005,CH,A),SIZE>(00000000
MODS E15>(E15,000,SORTLIB,N),E18>(E18,024,SORTLIB,N)
/*
  
```

023-IN

CD22/23 1

CD12/13 1

## 6.5.6 SORT WUC FOR DELETION

```
//C9897A EXEC C,601N,TIME>01,ACCT>035325007
//CHG,1U22 DN DSN>P,9897550,DISP,X,PASS),SPACEXCYL,[(001,001)] D22-OUT
//CHG,TF6IN DO *,SPACEXCYL,[(1,1)] 1440 CDS
00000 0%T TFS WANG C98970'T
010001 019999 R_PLACE 'T
TFG TU22 11 020Z000

74AEF
74AEH
74DE1
74DF1
74DG1
74DZ1
74KAA
74KAB
74KCA
74KEA
74KED
74ALA
74AL1
74APA
74APB
74APC
74APF
74APG
74APH
74APJ
74APK
74APL
74APM
74APP
74APR
74APS
74APT
74APU
74APV
74APW
74APX
74APY
74APZ
74AP2
74AP3
74AP4
74AP5
74AP6
74AP7
74ARB
74ARC
74ATA
74AU1
74BBA
74BB1
74PD1
74BKA
74RKB
74RRA
74RRB
74BS1
74BXA
74CD1
74CGA
74DB1
74DCA
74DCB
74DCC
74DCD
74DCE
74DC1
74DD1
74BY1
74CAB
74CAC
74CAD
74CAE
74CCA
74CCB
74CCC
74CCD
74CCE
74CCF
74CCG
74CCM
74CCJ
74CCR
```

74CCL  
74CFB  
74CJA  
74CJB  
74CJC  
74CJD  
74CJE  
74CJ1  
74FA0  
74FK1  
74FG1  
74FH1  
74FJ1  
74F00  
74FFA  
74FFB  
74FFC  
74FFD  
74FFE  
74FFF  
74FF0  
74FFH  
74FFJ  
74FFK  
74FFL  
74FFM  
74FDC  
74FDD  
74FDE  
74FDF  
74FDB  
74FDM  
74FUJ  
74FDK  
74FUL  
74FUM  
74FUN  
74FDP  
74FDQ  
74FUR  
74FUS  
74FOT  
74FOU  
74FUV  
74FDW  
74FDX  
74FOY  
74FUZ  
74FU1  
74FD2  
74FD3  
74FD4  
74FD5  
74FD6  
74FD7  
74FD8  
74FD9  
74PA1  
74PB1  
74PC1  
74BE1  
74PE1  
74PFA  
74PF1  
74PG1  
74PH1  
74PJ1  
74PK1  
74PL1  
74QAA  
74QA1  
74PM1  
74PN1  
74PP1  
74P00  
74KCB  
74KEC  
74KGA  
74KGB  
74KGC  
74KGD  
74KGE  
74KGF  
74KGG  
74KGM  
74KGJ  
74KGK

```

74KGL
74KH1
74KJA
74KK1
74KL1
74KN1
*END
/* PLACE T/P CONTROL CARDS BEFORE THIS CARD
//C9897B EXEC C9603N,TIME>01,ACCT>035323007
//CHG,TU22 DD DSN>P.9897550,DISP>OLD,PASS] D22-1N
T/P TU22 101C1002080
/* PLACE TFG DATA BEFORE THIS CARD
//C9897C EXEC P9622N,TIME>01,ACCT>35323007
//CHG,SORTIN DC DSN>P.9897550,DISP>OLD,DELETE], C022/23 1
// DCB>[LRECL>0080,BLKSIZE>1600],LABEL>X,NSL,RETPD>000]
//CHG,SORTOUT DD DSN>P.9897552,DISP>E,PASS],SPACE>[CYL,[001,001]], C012/13 1
// DCU>[LRECL>0080,BLKSIZE>1600]
//CHG,SYSIN DC *DCB>BLKSIZE>0080,SPACE>[TRK,[1,1]]
SORT FIELDS>[002,005,CH,A],SIZE>E0000300
MODS E15>[E15,008,SORTL18,N],E18>[E18,024,SORTL18,N]
/*

```

## 6.5.7 VERIFY WUC

```

//C9897F EXEC P9655L,TIME>05,ACCT>035323007
//CHG,TU12 DD DSN>P.9897552,DISP>OLD,PASS] D12-1N
//CHG,TU13 DD USN>P.9897553,DISP>OLD,PASS] D13-1N
//CHG,TU14 DD DISP>E,PASS],UNIT>[A+F3,2,DEFER],DSN>P.9897405, CT14/15 1
// VOL>SER>[+F3,A+F3,B+F3,C+F3,D+F3,E+F3,F+F3,G+F3,H+F3, CT14 2
// 1+F3,J+F3,K+F3,L+F3,M+F3,N+F3,O+F3,P+F3,Q+F3,R+F3,S+F3] T14 3
//CHG,TU24 DD DISP>E,PASS],UNIT>[A+F7,2,DEFER],DSN>P.9897406, CT24/25 1
// VOL>SER>[+F7,A+F7,B+F7,C+F7,D+F7,E+F7,F+F7,G+F7,H+F7, CT24 2
// 1+F7,J+F7,K+F7,L+F7,M+F7,N+F7,O+F7,P+F7,Q+F7,R+F7,S+F7] T24 3
//CHG,INPUT DD *SPACE>[CYL,[1,1]] 1440 CDS
00000 CCMBINE COMPILE G. WANG. C98970
01050 DATE-WRITTEN. 15 MAY 72. C98970
02000 ENVIRONMENT DIVISION. C98970
02010 CONFIGURATION SECTION. C98970
02020 SOURCE-COMPUTER. IBM-360. C98970
02030 OBJECT-COMPUTER. IBM-360. C98970
02100 INPUT-OUTPUT SECTION. C98970
02110 FILE-CONTROL. C98970
02120 SELECT TABLE-1-FILE ASSIGN TO UT-S-TU12 C98970
02130 RESERVE 1 ALTERNATE AREA. C98970
02140 SELECT TABLE-2-FILE ASSIGN TO UT-S-TU13 C98970
02150 RESERVE 1 ALTERNATE AREA. C98970
02160 SELECT DATA-IN-FILE ASSIGN TO UT-S-TU14 C98970
02170 RESERVE 1 ALTERNATE AREA. C98970
02180 SELECT DATA-OUT-FILE ASSIGN TO UT-S-TU24 C98970
02190 RESERVE 1 ALTERNATE AREA. C98970
02200 SELECT MSG-FILE ASSIGN TO DA-S-DT01 C98970
02210 RESERVE 1 ALTERNATE AREA. C98970
02220 SELECT CON-FILE ASSIGN TO DA-S-DT02 C98970
02230 RESERVE 1 ALTERNATE AREA. C98970
10000 DATA DIVISION. C98970
10010 FILE SECTION. C98970
11200 FD TABLE-1-FILE C98970
11210 RECORDING MODE IS F C98970
11220 BLOCK CONTAINS 20 RECORDS C98970
11230 RECORD CONTAINS 80 CHARACTERS C98970
11240 LABEL RECORDS ARE OMITTED C98970
11250 DATA RECORDS ARE TABLE-1-REC. C98970
11260 01 TABLE-1-REC SYNC. C98970
11270 02 FILLER PICTURE X. C98970
11280 02 WUC-1 PICTURE X(5). C98970
11290 02 FILLER PICTURE X(74). C98970
12000 FD TABLE-2-FILE C98970
12010 RECORDING MODE IS F C98970
12020 BLOCK CONTAINS 20 RECORDS C98970
12030 RECORD CONTAINS 80 CHARACTERS C98970
12040 LABEL RECORDS ARE OMITTED C98970
12050 DATA RECORDS ARE TABLE-2-REC. C98970
12060 01 TABLE-2-REC SYNC. C98970
12070 02 FILLER PICTURE X. C98970
12080 02 WUC-2 PICTURE X(5). C98970
12090 02 FILLER PICTURE X. C98970
12100 02 WUC-3 PICTURE X(5). C98970
12110 02 FILLER PICTURE X(66). C98970
13000 FD DATA-1-FILE C98970
13010 RECORDING MODE IS F C98970
13020 BLOCK CONTAINS 60 RECORDS C98970
13030 RECORD CONTAINS 50 CHARACTERS C98970

```

6-111

50300	READ-TABLE-2.	C98970
50310	READ TABLE-2-FILE, AT ENO GO TO R-D.	C98970
50320	ADD 1 TO NO-TAB-2.	C98970
50330	MOVE WUC-2 TO TABLE-2 [1, NO-TAB-2].	C98970
50340	MOVE WUC-3 TO TABLE-2 [2, NO-TAB-2].	C98970
50350	GO TO READ-TABLE-2.	C98970
50355	R-D.	C98970
50360	PERFORM CHECK-WUC-DATA THRU ENO-CWD.	C98970
50370	IF NO-ERRORS IS NOT EQUAL TO ZERO DISPLAY NO-ERRORS : ERRORS:	C98970
50380	UPON CONSOLE, GO TO CFA.	C98970
50400	READ-DATA-INPUT.	C98970
50410	READ DATA-IN-FILE, AT ENO GO TO CLOSE-FILE.	C98970
50420	ADD 1 TO REC-READ.	C98970
50430	IF WEEK IS LESS THAN WEEK-CHNG GO TO CHK-WUC.	C98970
50500	COPY-REC.	C98970
50510	WRITE DATA-OUT-REC FROM DATA-IN-REC.	C98970
50520	ADD 1 TO REC-PASS.	C98970
50530	GO TO READ-DATA-INPUT.	C98970
50600	CHK-WUC.	C98970
50610	IF WUC-2-DIGIT IS NOT EQUAL TO WUC2 GO TO COPY-REC.	C98970
51000	MOVE ZERO TO CNT.	C98970
51010	CHK-TAB-1.	C98970
51020	ADD 1 TO CNT.	C98970
51030	MOVE TABLE-1 [CNT] TO WUC-TEMP.	C98970
51040	IF WUC IS LESS THAN WUC-TEMP GO TO END-CHK-TAB-1.	C98970
51050	IF WUC IS EQUAL TO WUC-TEMP GO TO DELETE-REC.	C98970
51060	IF CNT IS LESS THAN NO-TAB-1 GO TO CHK-TAB-1.	C98970
51070	ENO-CHK-TAB-1.	C98970
51080	MOVE ZERO TO CNT.	C98970
51100	CHK-TAB-2.	C98970
51110	ADD 1 TO CNT.	C98970
51120	MOVE TABLE-2 [1, CNT] TO WUC-TEMP.	C98970
51130	IF WUC IS LESS THAN WUC-TEMP GO TO COPY-REC.	C98970
51140	IF WUC IS EQUAL TO WUC-TEMP GO TO MOVE-WUC.	C98970
51150	IF CNT IS LESS THAN NO-TAB-2 GO TO CHK-TAB-2.	C98970
51160	GO TO COPY-REC.	C98970
51200	DELETE-REC.	C98970
51210	ADD 1 TO REC-DROP.	C98970
51220	GO TO READ-DATA-INPUT.	C98970
51300	MOVE-WUC.	C98970
51310	MOVE TABLE-2 [2, CNT] TO WUC.	C98970
51320	ADD 1 TO REC-CHNG.	C98970
51330	GO TO COPY-REC.	C98970
52000	CLOSE-FILE.	C98970
52010	COMPUTE CNT > REC-PASS - REC-PASS / 60 * 60.	C98970
52020	IF CNT IS EQUAL TO ZERO GO TO CFA.	C98970
52100	NINE-FILL.	C98970
52110	WRITE DATA-OUT-REC FROM NINES.	C98970
52120	ADD 1 TO CNT.	C98970
52130	IF CNT IS LESS THAN 60 GO TO NINE-FILL.	C98970
52200	CFA.	C98970
52210	MOVE REC-READ TO TEMP-NO.	C98970
52220	DISPLAY : REC-READ : TEMP-NO UPON CONSOLE.	C98970
52230	MOVE REC-PASS TO TEMP-NO.	C98970
52240	DISPLAY : REC-PASS : TEMP-NO UPON CONSOLE.	C98970
52250	MOVE REC-CHNG TO TEMP-NO.	C98970
52260	DISPLAY : REC-CHNG : TEMP-NO UPON CONSOLE.	C98970
52270	MOVE REC-DROP TO TEMP-NO.	C98970
52280	DISPLAY : REC-DROP : TEMP-NO UPON CONSOLE.	C98970
52290	DISPLAY : E0J 9897 : UPON CONSOLE.	C98970
52292	CLOSE TABLE-1-FILE, TABLE-2-FILE, DATA-IN-FILE, CON-FILE,	C98970
52294	DATA-OUT-FILE, MSG-FILE.	C98970
52300	GOBACK.	C98970
54000	CHECK-WUC-LATA.	C98970
54010	MOVE ZERO TO CNT.	C98970
54100	CWDA.	C98970
54110	ADD 1 TO CNT.	C98970
54120	MOVE TABLE-2 [1, CNT] TO WUC-TEMP.	C98970
54130	MOVE ZERO TO KNT.	C98970
54200	CWOB.	C98970
54210	ADD 1 TO KNT.	C98970
54220	IF TABLE-1 [KNT] IS GREATER THAN WUC-TEMP GO TO CWDC.	C98970
54230	IF TABLE-1 [KNT] IS EQUAL TO WUC-TEMP MOVE MSG-1 TO FILLER-A.	C98970
54235	PERFORM BAO-DATA.	C98970
54240	IF KNT IS LESS THAN NO-TAB-1 GO TO CWOB.	C98970
54300	CWOC.	C98970
54310	IF CNT IS LESS THAN NO-TAB-2 GO TO CWDA.	C98970
54320	MOVE ZERO TO CNT.	C98970
54400	CWOO.	C98970
54410	ADD 1 TO CNT.	C98970
54420	MOVE TABLE-2 [2, CNT] TO WUC-TEMP.	C98970
54430	MOVE ZERO TO KNT.	C98970
54500	CWOE.	C98970
54510	ADD 1 TO KNT.	C98970
54515	IF TABLE-1 [KNT] IS GREATER THAN WUC-TEMP GO TO CWDC.	C98970
54520	IF TABLE-1 [KNT] IS EQUAL TO WUC-TEMP GO TO CWDF.	C98970
54530	IF KNT IS LESS THAN NO-TAB-1 GO TO CWDE.	C98970

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54535 CWDH. C98970
54540 MOVE ZE10 TO KNT. C98970
54550 CWDH. C98970
54560 ADD 1 TO KNT. C98970
54565 IF TABL-2 [1, KNT] IS GREATER THAN WUC-TEMP GO TO B-D-A. C98970
54570 IF TABL-2 [1, KNT] IS EQUAL TO WUC-TEMP GO TO CWDH. C98970
54580 IF KNT IS LESS THAN NO-TAB-2 GO TO CWDH. C98970
54585 B-D-A. C98970
54590 MOVE MS -2 TO FILLER-A. C98970
54600 BAD-DATA. C98970
54610 MOVE WUC-TEMP TO WUC-MS6. C98970
54620 WRITE P.6-REC. C98970
54630 ADD 1 TO NO-ERRORS. C98970
54700 CWDH. C98970
54710 IF CNT IS LESS THAN NO-TAB-2 GO TO CWDH. C98970
54800 MOVE ZE10 TO KNT. C98970
54810 MOVE 1 TO CNT. C98970
54820 TAB-1-DUP. C98970
54830 ADD 1 TO KNT. C98970
54840 ADD 1 TO CNT. C98970
54845 MOVE TABLE-1 [KNT] TO WUC-TEMP. C98970
54850 IF WUC-TEMP IS EQUAL TO TABLE-1 [CNT] MOVE MS6-3 TO C98970
54855 FILLER-... PERFORM BAD-DATA. C98970
54860 IF CNT IS LESS THAN NO-TAB-1 GO TO TAB-1-DUP. C98970
54900 MOVE ZERO TO KNT. C98970
54910 MOVE 1 TO CNT. C98970
54920 TAB-2-DUP. C98970
54930 ADD 1 TO KNT. C98970
54940 ADD 1 TO CNT. C98970
54945 MOVE TABLE-2 [1, KNT] TO WUC-TEMP. C98970
54950 IF WUC-TEMP IS EQUAL TO TABLE-2 [1, CNT] C98970
54960 MOVE MS6-4 TO FILLER-A, PERFORM BAD-DATA. C98970
54970 IF CNT IS LESS THAN NO-TAB-2 GO TO TAB-2-DUP. C98970
55000 MOVE 1 TO CNT. C98970
55010 CHK-LMS. C98970
55020 MOVE TABLE-2 [2, CNT] TO WUC-TEMP. C98970
55030 MOVE CN1 TO KNT. C98970
55040 CHK-LMSA. C98970
55050 ADD 1 TO KNT. C98970
55060 IF TABLE-2 [2, KNT] IS EQUAL TO WUC-TEMP MOVE MS6-5 TO C98970
55065 FILLER-... PERFORM BAD-DATA. C98970
55070 IF KNT IS LESS THAN NO-TAB-2 GO TO CHK-LMSA. C98970
55080 ADD 1 TO CNT. C98970
55090 IF CNT IS LESS THAN NO-TAB-2 GO TO CHK-LMS. C98970
56000 END-CWD. E:IT. C98970
/* PLACE COBOL SOURCE BEFORE THIS CARD
//CHG.TF6IN DU *.SPACE>[CYL,[1,1]] 1440 CDS
00000 GET TF6 WANG C98970
010001 014999 REP:ACE 'T
TF6 DT02 11 0202080
280 74
*END
/* PLACE TF6 DATA BEFORE THIS CARD
//TPR.TU14 DU DISP>[OLD,KEEP],VOL>SER>+F3,UNIT>T+F3 T14
//TPR.TU24 DU DISP>[OLD,KEEP],VOL>SER>+F7,UNIT>T+F7 T24
//TPR.TPRIN DU *.SPACE>[TRK,[1,1]]
T/P TU12 10200402080
T/P TU13 10200802080
T/P TU14 10100502050
T/P TU24 10200502050
T/P DT01 10200702070
T/P DT02 10010602080
/* PLACE T/P CONTROL CARDS BEFORE THIS CARD

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### 6.6.1 PREPROCESSOR FORMATTER

[illegible]

30260		02 FILLER	PICTURE X(25)	VALUE	C98970	
30270			:999999999999999999999999999999.			C98970
30280		02 FILLER	PICTURE X(20)	VALUE	C98970	
30290			:999999999999999999999999999999.			C98970
30310	01	RECORDS-READ	PICTURE 9(7)	SYNC VALUE ZERO.	C98970	
30320	01	RECORDS-PASS	PICTURE 9(7)	SYNC VALUE ZERO.	C98970	
30330	01	REC-1-CNT	PICTURE 9(6)	SYNC VALUE ZERO.	C98970	
30340	01	REC-3-CNT	PICTURE 9(7)	SYNC VALUE ZERO.	C98970	
30350	01	REC-4-CNT	PICTURE 9(7)	SYNC VALUE ZERO.	C98970	
30355	01	SN-TOT-CNT	PICTURE 9(3)	SYNC VALUE ZERO.	C98970	
30360	01	FH-LNI	PICTURE S9(6)	SYNC VALUE ZERO COMPUTATIONAL.	C98970	
30370	01	SORTIES-CNT	PICTURE S9(5)	SYNC VALUE ZERO COMPUTATIONAL.	C98970	
30380	01	LANDINGS-CNT	PICTURE S9(5)	SYNC VALUE ZERO COMPUTATIONAL.	C98970	
30390	01	KNT	PICTURE S999	SYNC VALUE ZERO COMPUTATIONAL.	C98970	
30400	01	KOUNT	PICTURE S999	SYNC VALUE ZERO COMPUTATIONAL.	C98970	
30410	01	SGCNT	PICTURE S999	SYNC VALUE ZERO COMPUTATIONAL.	C98970	
30420	01	NSGCNT	PICTURE S999	SYNC VALUE ZERO COMPUTATIONAL.	C98970	
30500	01	SG-CNT	PICTURE 9(6)	SYNC VALUE ZERO.	C98970	
30510	01	NSG-CNT	PICTURE 9(6)	SYNC VALUE ZERO.	C98970	
30520	01	SG-HCNT	PICTURE 9(7)	SYNC VALUE ZERO.	C98970	
30530	01	NSG-RCNT	PICTURE 9(7)	SYNC VALUE ZERO.	C98970	
30540	01	R1-G-CNT	PICTURE 9(6)	SYNC VALUE ZERO.	C98970	
30550	01	R3-G-CNT	PICTURE 9(7)	SYNC VALUE ZERO.	C98970	
30560	01	R4-G-CNT	PICTURE 9(7)	SYNC VALUE ZERO.	C98970	
33000	01	TEST-A SYNC.			C98970	
33010	02	SN-A	PICTURE X(8)	VALUE SPACE.	C98970	
33020	02	WK-A	PICTURE X(3)	VALUE SPACE.	C98970	
33100	01	TEST-B SYNC.			C98970	
33110	02	SN-B	PICTURE X(8)	VALUE SPACE.	C98970	
33120	02	WK-B	PICTURE X(3)	VALUE SPACE.	C98970	
39000	01	IN-TEST SYNC.			C98970	
39010	02	MUS-IN	PICTURE X(5).		C98970	
39020	02	SH-IN	PICTURE X(8).		C98970	
39030	02	WK-IN	PICTURE X(3).		C98970	
39035	02	WUC-1-IN	PICTURE X.		C98970	
39040	02	FILL-A	PICTURE X(11).		C98970	
39050	02	FH-IN	PICTURE S9(4).		C98970	
39060	02	FILL-B	PICTURE X(3).		C98970	
39070	02	SURITIES-IN	PICTURE S9(4).		C98970	
39080	02	LANDINGS-IN	PICTURE S9(4).		C98970	
39090	02	FILL-C	PICTURE X(5).		C98970	
39100	02	TYPLE-IN	PICTURE X(1).		C98970	
39110	02	FILL-D	PICTURE X(3).		C98970	
40000	01	REC-TYPE-3 SYNC.			C98970	
40010	02	MUS-3	PICTURE X(5).		C98970	
40020	02	SN-3	PICTURE X(8).		C98970	
40030	02	WK-3	PICTURE X(3).		C98970	
40040	02	FLO-3	PICTURE X(12).		C98970	
40050	02	LAHOR-3	PICTURE X(4).		C98970	
40060	02	AIE-3	PICTURE X(3).		C98970	
40070	02	NOMM-3	PICTURE X(4).		C98970	
40080	02	NOMS-3	PICTURE X(4).		C98970	
40090	02	UNIT-ATC-3	PICTURE X(5).		C98970	
40100	02	TYPLE-3	PICTURE X(1).		C98970	
40110	02	REC-3-HOLD	PICTURE X(21).		C98970	
40200	01	REC-TYPE-4 SYNC.			C98970	
40210	02	MUS-4	PICTURE X(5).		C98970	
40220	02	SH-4	PICTURE X(8).		C98970	
40230	02	WK-4	PICTURE X(3).		C98970	
40240	02	FLLI-4	PICTURE X(12).		C98970	
40250	02	LAHOR-4	PICTURE X(4).		C98970	
40260	02	FLO-4A	PICTURE X(16).		C98970	
40270	02	TYPLE-4	PICTURE X(1).		C98970	
40280	02	REC-4-HOLD	PICTURE X(21).		C98970	
40400	01	REC-1-HOLD SYNC.			C98970	
40410	02	FH-HOLD	PICTURE S9(4).		C98970	
40420	02	FH-SUM-HOLD	PICTURE S9(6).		C98970	
40430	02	SORTIES-SUM-HOLD	PICTURE S9(5).		C98970	
40440	02	LANDINGS-SUM-HOLD	PICTURE S9(5).		C98970	
40450	02	RCD-MK-HOLD	PICTURE X	VALUE I#:	C98970	
40600	01	SN-TOTAL SYNC.			C98970	
40610	0					

40770	02	FILLER	PICTURE X	VALUE SPACE.	C98970
40780	02	NSG-TOT	PICTURE ZZZZZ9.		C98970
40790	02	REC-KP-TOT	PICTURE X(5)	VALUE SPACE.	C98970
40800	01	RCO-TOTALS SYNC.			C98970
40810	02	FILLER	PICTURE K	VALUE SPACE.	C98970
40820	02	RECUROS-INPUT	PICTURE ZZZZZ9.		C98970
40830	02	FILLER	PICTURE K	VALUE SPACE.	C98970
40840	02	REC-3-4-OUT	PICTURE ZZZZZ9.		C98970
40845	02	FILLER	PICTURE X	VALUE SPACE.	C98970
40850	02	SN-OUT	PICTURE Z9.		C98970
40860	02	FILLER	PICTURE K	VALUE SPACE.	C98970
40865	02	SG-GTOT	PICTURE ZZZZZ9.		C98970
40870	02	FILLER	PICTURE X	VALUE SPACE.	C98970
40875	02	NSG-GTOT	PICTURE ZZZZZ9.		C98970
40880	02	FILLER	PICTURE X	VALUE SPACE.	C98970
40890	02	R1-G-TOT	PICTURE ZZZZZ9.		C98970
40900	02	FILLER	PICTURE X	VALUE SPACE.	C98970
40910	02	R3-G-TOT	PICTURE ZZZZZ9.		C98970
40920	02	FILLER	PICTURE X	VALUE SPACE.	C98970
40930	02	R4-G-TOT	PICTURE ZZZZZ9.		C98970
40940	02	FILLER	PICTURE X(10)	VALUE SPACE.	C98970
40980	01	SN-TOT-ULNK SYNC.			C98970
40990	02	FILLER	PICTURE X(70)	VALUE SPACE.	C98970
50000		PROCEDURE DIVISION.			C98970
50010		BANK1.			C98970
50020		OPEN INPUT INFILE OUTPUT OUTBANK-FILE.			C98970
50030		OPEN OUTPUT RCO-KP-FILE.			C98970
50035		OPEN OUTPUT SG-FIL NSG-FILE.			C98970
50040		SUBTRACT 1 FROM SN-TOT-CNT.			C98970
50100		READ-IN.			C98970
50110		MOVE TEST-A TO TEST-B.			C98970
50120		READ INFILE INTO I:-TEST			C98970
50130		AT ENO GO TO RECORD-KEEP.			C98970
50135		ADD 1 TO RECORDS-READ.			C98970
50140		MOVE SN-IN TO SN-A.			C98970
50150		MOVE WK-IN TO WK-A.			C98970
50200		COMPARE-SN.			C98970
50210		IF SN-A EQUAL SN-B GO TO COMPARE-WK.			C98970
50212		MOVE SG-CNT TO SG-TOT.			C98970
50214		MOVE NSG-CNT TO NSG-TOT.			C98970
50220		MOVE SN-B TO SN-TOT.			C98970
50230		MOVE FH-CNT TO FH-TOT.			C98970
50240		MOVE SORTIES-CNT TO SORTIES-TOT.			C98970
50250		MOVE LANDINGS-CNT TO LANDINGS-TOT.			C98970
50252		MOVE REC-1-CNT TO TYPE-1-TOT.			C98970
50253		MOVE REC-3-CNT TO TYPE-3-TOT.			C98970
50254		MOVE REC-4-CNT TO TYPE-4-TOT.			C98970
50256		ADD REC-1-CNT TO R1-G-CNT.			C98970
50257		ADD REC-3-CNT TO R3-G-CNT.			C98970
50258		ADD REC-4-CNT TO R4-G-CNT.			C98970
50260		WRITE SN-COUNT FROM SN-TOTAL.			C98970
50270		ADD 1 TO SN-TOT-CNT.			C98970
50272		IF TYPE-IN EQUAL 9: GO TO RECORD-KEEP.			C98970
50280		MOVE ZEROS TO FH-CNT SORTIES-CNT LANDINGS-CNT.			C98970
50290		MOVE ZEROS TO FH-HOLD FH-SUM-HOLD SORTIES-SUM-HOLD			C98970
50300		LANDINGS-SUM-HOLD.			C98970
50310		MOVE ZEROS TO SG-CNT NSG-CNT			C98970
50320		REC-1-CNT			C98970
50330		REC-3-CNT			C98970
50340		REC-4-CNT.			C98970
50500		GO TO COMPARE-WK-A-1.			C98970
51000		COMPARE-WK.			C98970
51010		IF WK-A GREATER THAN WK-B GO TO COMPARE-WK-A-1.			C98970
51020		GO TO TYPE-3.			C98970
51030		COMPARE-WK-A-1.			C98970
51040		IF TYPE-IN EQUAL 11: GO TO TYPE-1-PROC.			C98970
51050		COMPARE-TYPE-3.			C98970
51060		IF TYPE-IN EQUAL 13: GO TO TYPE-3-1.			C98970
51070		IF TYPE-IN GREATER THAN 13: GO TO TYPE-4-1.			C98970
51080		GO TO READ-IN.			C98970
51100		TYPE-1-PROC.			C98970
51105		ADD 1 TO REC-1-CNT.			C98970
51110		IF FH-IN LESS THAN ZERO GO TO TYPE-1-PROC-A.			C98970
51120		ADD FH-IN TO FH-CNT.			C98970
51130		ADD SORTIES-IN TO SORTIES-CNT.			C98970
51140		ADD LANDINGS-IN TO LANDINGS-CNT.			C98970
51150		MOVE FH-IN TO FH-HOLD.			C98970
51160		GO TO TYPE-1-PROC-B.			C98970
51200		TYPE-1-PROC-A.			C98970
51202		MOVE ZEROS TO FH-HOLD.			C98970
51204		TYPE-1-PROC-B.			C98970
51210		MOVE FH-CNT TO FH-SUM-HOLD.			C98970
51220		MOVE SORTIES-CNT TO SORTIES-SUM-HOLD.			C98970
51230		MOVE LANDINGS-CNT TO LANDINGS-SUM-HOLD.			C98970
51250		GO TO READ-IN.			C98970
51300		TYPE-3-1.			C98970
51310		MOVE ZEROS TO FH-HOLD.			C98970

51320	MOVE IN-TEST TO REC-TYPE-3.	C98970
51330	MOVE REC-1-HOLD TO REC-3-HOLD.	C98970
51340	WRITE OUT-REC FROM REC-TYPE-3.	C98970
51350	ADD 1 TO REC-3-CNT.	C98970
51355	ADD 1 TO RECORDS-PASS.	C98970
51360	IF WUC-1-IN EQUAL :0: GO TO SG-OUTPUT.	C98970
51370	GO TO MSG-OUTPUT-3.	C98970
52000	TYPE-4-1.	C98970
52010	IF TYPE-IN GREATER THAN :4: GO TO TYPE-9-1.	C98970
52020	MOVE ZEROS TO FH-HOLD.	C98970
52030	MOVE IN-TEST TO REC-TYPE-4.	C98970
52040	MOVE REC-1-HOLD TO REC-4-HOLD.	C98970
52050	WRITE OUT-REC FROM REC-TYPE-4.	C98970
52060	ADD 1 TO REC-4-CNT.	C98970
52065	ADD 1 TO RECORDS-PASS.	C98970
52070	GO TO MSG-OUTPUT-4.	C98970
52100	TYPE-9-1.	C98970
52110	IF TYPE-IN EQUAL :9: GO TO RECORD-KEEP.	C98970
52120	GO TO READ-IN.	C90970
53000	TYPE-3.	C98970
53010	IF TYPE-IN EQUAL :3: GO TO TYPE-3-A.	C98970
53020	IF TYPE-IN GREATER THAN :3: GO TO TYPE-4.	C98970
53030	GO TO READ-IN.	C98970
53100	TYPE-3-A.	C98970
53110	MOVE IN-TEST TO REC-TYPE-3.	C98970
53120	MOVE REC-1-HOLD TO REC-3-HOLD.	C98970
53130	WRITE OUT-REC FROM REC-TYPE-3.	C98970
53140	ADD 1 TO REC-3-CNT.	C98970
53145	ADD 1 TO RECORDS-PASS.	C98970
53150	IF WUC-1-IN EQUAL :1: GO TO SG-OUTPUT.	C98970
53160	GO TO MSG-OUTPUT-3.	C98970
53400	TYPE-4.	C98970
53410	IF TYPE-IN EQUAL :4: GO TO TYPE-4-A.	C98970
53420	GO TO TYPE-9.	C98970
53500	TYPE-4-A.	C98970
53510	MOVE IN-TEST TO REC-TYPE-4.	C98970
53520	MOVE REC-1-HOLD TO REC-4-HOLD.	C98970
53530	WRITE OUT-REC FROM REC-TYPE-4.	C98970
53540	ADD 1 TO REC-4-CNT.	C98970
53545	ADD 1 TO RECORDS-PASS.	C98970
53550	GO TO MSG-OUTPUT-4.	C98970
53900	TYPE-9.	C98970
53910	IF TYPE-IN EQUAL :9: GO TO RECORD-KEEP.	C98970
53920	GO TO READ-IN.	C98970
54000	SG-OUTPUT.	C98970
54010	WRITE SG-REC FROM REC-TYPE-3.	C98970
54020	ADD 1 TO SG-CNT SG-RCNT.	C90970
54050	GO TO READ-IN.	C98970
54100	MSG-OUTPUT-3.	C90970
54110	WRITE MSG-REC FROM REC-TYPE-3.	C98970
54120	ADD 1 TO MSG-CNT MSG-RCNT.	C98970
54150	GO TO READ-IN.	C98970
54200	MSG-OUTPUT-4.	C98970
54210	WRITE MSG-REC FROM REC-TYPE-4.	C98970
54220	ADD 1 TO MSG-CNT MSG-RCNT.	C98970
54250	GO TO READ-IN.	C98970
55000	RECORD-KEEP.	C90970
55060	MOVE SN-TOT-BLKN TO SN-TOTAL.	C98970
55065	SUBTRACT 1 FROM RECORDS-READ.	C98970
55070	MOVE RECORDS-READ TO RECORDS-INPUT.	C98970
55080	MOVE RECORDS-PASS TO REC-3-4-OUT.	C98970
55085	SUBTRACT 2 FROM SN-TOT-CNT.	C90970
55087	MOVE SN-TOT-CNT TO SN-OUT.	C98970
55100	MOVE SG-RCNT TO SG-GTOT.	C98970
55110	MOVE MSG-RCNT TO MSG-GTOT.	C98970
55120	MOVE R1-G-CNT TO R1-G-TOT.	C98970
55130	MOVE R3-G-CNT TO R3-G-TOT.	C98970
55140	MOVE R4-G-CNT TO R4-G-TOT.	C98970
55290	MOVE KCD-TOTALS TO SN-TOTAL.	C98970
55300	WRITE SN-COUNT FROM SN-TOTAL.	C98970
55310	ADD 2 TO SN-TOT-CNT.	C98970
55400	GO TO BLOCK-CHECK.	C98970
62000	BLOCK-CHECK.	C98970
62010	COMPUTE KOUNT > RECORDS-PASS - [(RECORDS-PASS / 40) * 40].	C98970
62040	LOOP3.	C98970
62050	WRITE OUT-REC FROM NINE.	C98970
62060	ADD 1 TO KOUNT.	C98970
62070	IF KOUNT IS LESS THAN 40 GO TO LOOP3.	C98970
62100	BLOCK-CHECK-2.	C98970
62115	COMPUTE KNT > SN-TOT-CNT - [(SN-TOT-CNT / 25) * 25].	C98970
62130	LOOP4.	C98970
62140	WRITE SN-COUNT FROM NINE.	C98970
62150	ADD 1 TO KNT.	C98970
62160	IF KNT IS LESS THAN 25 GO TO LOOP4.	C98970
62200	BLOCK-CHECK-3.	C98970
62210	COMPUTE SGCNT > SG-RCNT - [(SG-RCNT / 40) * 40].	C98970
62220	LOOP5.	C98970



#### 6.6.4 REFORMATTED DATA BANK SORT

```
//T9897K JOB 01.: G. WANG. :.PRTY>02.TYPRUN>HOLD SORT 01 X1310
//C9897K EXEC P4622N.W>199.TIME>04.ACCT>D35323007 22/12 SORT
//CHG.SORTIN DU DISP>(.KEEP),UNIT>[A+F5.2.DEFER], CT22/23 1
// DSN>E.989740,, CT22 2
// VOL>SER>[+F5.A+F5.B+F5.C+F5.D+F5.E+F5.F+F5.G+F5.H+F5. CT22 3
// I+F5.J+F5.K+F5.L+F5.M+F5.N+F5.O+F5.P+F5.Q+F5.R+F5.S+F5],CT22 4
// DCB>[LRECL>0070,RLKSIZE>2800],LABEL>[.NSL,RETPD>002]
//CHG.SORTOUT DU DISP>(.PASS),UNIT>[A+F1.2.DEFER],DSN>A.9897410, CT12/13 1
// VOL>SER>[+F1.A+F1.B+F1.C+F1.D+F1.E+F1.F+F1.G+F1.H+F1. CT12 2
// I+F1.J+F1.K+F1.L+F1.M+F1.N+F1.O+F1.P+F1.Q+F1.R+F1.S+F1],CT12 3
// DCB>[LRECL>0070,RLKSIZE>2800]
//CHG.SYSIN DU *.DCB>BLKSIZE>0080,SPACE>[TRK,[1,1]]
SORT FIELDS>[017.005,CH,A,023,003,CH,A,006,008,CH,A, C
014,003,CH,A],SIZE>L0700000
MODS E15>[E15.008,SORTLIB,1],E18>[E18.024,SORTLIB,N]
/*
//C9897K EXEC C9603N.TIME>02.ACCT>D35323007 STDALONE 1 P 01134
//CHG.TU12 DD DISP>(.KEEP),UNIT>[A+F1.2.DEFER],DSN>A.9897410, CT12/13 1
// VOL>SER>[+F1.A+F1.B+F1.C+F1.D+F1.E+F1.F+F1.G+F1.H+F1. CT12 2
// I+F1.J+F1.K+F1.L+F1.M+F1.N+F1.O+F1.P+F1.Q+F1.R+F1.S+F1] T12 3
//CHG.TPRIN DD *.SPACE>[TRK,[1,1]]
T/P TU12 11000702070
/* PLACE T/P CONTROL CARDS BEFORE THIS CARD
```

## 6.7 PROGRAMS FOR FREQUENCY ANALYSES

### 6.7.1 TITLE FORMATTER AND FIVE-DIGIT WUC ANALYSIS

```

//C98970 JOB 01: G. WANG I,PRTY>02, TYPRUN>HOLD
//C98970 EXEC PY65SL,TIME>02,ACCT>035323007
//CHG,TU12 DD DISP>(,PASS),UNIT>(A+F1,2,DEFEN),DSN>+A,9897416, CT12/13 1
// VOL>SER>(F1,A+F1,8+F1,C+F1,D+F1,E+F1,F+F1,G+F1,H+F1, CT12 2
// I+F1,J+F1,K+F1,L+F1,M+F1,N+F1,O+F1,P+F1,Q+F1,R+F1,S+F1) T12 3
//CHG,TU14 DU DISP>(,PASS),UNIT>(T+F3,1,DEFEN),DSN>+C,9897440, CT14 1
// VOL>SER>(F3,A+F3,8+F3,C+F3,D+F3,E+F3,F+F3,G+F3,H+F3, CT14 2
// I+F3,J+F3,K+F3,L+F3,M+F3,N+F3,O+F3,P+F3,Q+F3,R+F3,S+F3) T14 3
//CHG,TU22 DD DISP>(,PASS),UNIT>(A+F5,2,DEFEN),DSN>+E,9897441, CT22/23 1
// VOL>SER>(F5,A+F5,8+F5,C+F5,D+F5,E+F5,F+F5,G+F5,H+F5, CT22 2
// I+F5,J+F5,K+F5,L+F5,M+F5,N+F5,O+F5,P+F5,Q+F5,R+F5,S+F5) T22 3
//CHG,TU24 DU DISP>(,PASS),UNIT>(T+F7,1,DEFEN),DSN>+G,9897442, CT24 1
// VOL>SER>(F7,A+F7,8+F7,C+F7,D+F7,E+F7,F+F7,G+F7,H+F7, CT24 2
// I+F7,J+F7,K+F7,L+F7,M+F7,N+F7,O+F7,P+F7,Q+F7,R+F7,S+F7) T24 3
//CHG,TU25 DU DISP>(,PASS),UNIT>(T+F9,1,DEFEN),DSN>+H,9897443, CT25 1
// VOL>SER>(F9,A+F9,8+F9,C+F9,D+F9,E+F9,F+F9,G+F9,H+F9, CT25 2
// I+F9,J+F9,K+F9,L+F9,M+F9,N+F9,O+F9,P+F9,Q+F9,R+F9,S+F9) T25 3
//CHG,INPUT DU +,SPACE>(CYL(1,1)) 1440 CDS
00000 COMPILE G. WANG, C98970
01040 DATE-WRITE... 15 APR 72. C98970
01050 REMARKS. C98970
01060 MAINTENANCE STUDY PROGRAM 1A. C98970
01070 FREQUENCY ANALYSIS. C98970
01080 FREQUENCY OF WORK UNIT CODE REPAIR ACTION. C98970
01090 (5 DIGIT LEVEL) C98970
01100 COMPUTES FREQUENCY OF SPECIFIC SG-WUC. C98970
01110 FORMATS FREQUENCIES FOR TITLE. C98970
01120 COMPUTES FREQUENCY OF SPECIFIC WDC. C98970
01130 THIS REPEATED FOR EACH NON-SG-WUC AND HMC. C98970
01140 INPUT SORT SEQUENCE C98970
01150 WUC, HMC, SERIAL-NO, WEEK. C98970
02000 ENVIRONMENT DIVISION. C98970
02010 CONFIGURATION SECTION. C98970
02020 SOURCE=COMPUTER. IBM-360. C98970
02030 OBJECT=COMPUTER. IBM-360. C98970
02100 INPUT-OUTPUT SECTION. C98970
02110 FILE-CONTROL. C98970
02120 SELECT IN-FILE-UB ASSIGN TO UT-S-TU12 C98970
02130 RESERVE 1 ALTERNATE AREA. C98970
02140 SELECT IN-FILE-ISC ASSIGN TO DA-S-DT01 C98970
02150 RESERVE 1 ALTERNATE AREA. C98970
02160 SELECT OUT-JATA ASSIGN TO UT-S-TU22 C98970
02170 RESERVE 1 ALTERNATE AREA. C98970
02180 SELECT OUT-TITLES ASSIGN TO UT-S-TU14 C98970
02190 RESERVE 1 ALTERNATE AREA. C98970
02200 SELECT OUT-PHINI-NI ASSIGN TO UT-S-TU24 C98970
02210 RESERVE 1 ALTERNATE AREA. C98970
02220 SELECT OUT-PHINI-ISC ASSIGN TO UT-S-TU25 C98970
02230 RESERVE 1 ALTERNATE AREA. C98970
10000 DATA DIVISION. C98970
10010 FILE SECTION. C98970
10100 FD IN-FILE-UB C98970
10110 BLOCK CONTAINS 40 RECORDS C98970
10140 RECORD CONTAINS 70 CHARACTERS C98970
10150 LABEL RECORDS ARE OMITTED C98970
10160 DATA RECORDS ARE IN-REC-D-B. C98970
10200 01 IN-REC-U-B SYNC. C98970
10210 02 FILLER PICTURE X(70). C98970
11300 FD IN-FILE-ISC C98970
11320 RECORDING MODE IS F C98970
11330 BLOCK CONTAINS 20 RECORDS C98970
11340 RECORD CONTAINS 80 CHARACTERS C98970
11350 LABEL RECORDS ARE STANDARD C98970
11360 DATA RECORDS ARE IN-REC-ISC. C98970
11400 01 IN-REC-ISC SYNC. C98970
11410 02 FILLER PICTURE X(80). C98970
12100 FD OUT-DATA C98970
12120 RECORDING MODE IS F C98970
12130 BLOCK CONTAINS 23 RECORDS C98970
12140 RECORD CONTAINS 130 CHARACTERS C98970
12150 LABEL RECORDS ARE OMITTED C98970
12160 DATA RECORDS ARE TAPE-FILE. C98970
12180 01 TAPE-FILE SYNC PICTURE X(130). C98970
13100 FD OUT-TITLES C98970
13120 RECORDING MODE IS F C98970
13130 BLOCK CONTAINS 23 RECORDS C98970
13140 RECORD CONTAINS 130 CHARACTERS C98970
13150 LABEL RECORDS ARE OMITTED C98970
13160 DATA RECORDS ARE TAPE-FILE-TI. C98970
13170 01 TAPE-FILE-TI SYNC PICTURE X(130). C98970
14100 FD OUT-PHINI-NI C98970

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14120		RECORDING MODE IS F		
14130		BLOCK CONTAINS 15 RECORDS		C98970
14140		RECORD CONTAINS 130	CHARACTERS	C98970
14150		LABEL RECORDS ARE OMITTED		C98970
14160		DATA RECORDS ARE NI-DATA.		C98970
14170	01	NI-DATA SYNC	PICTURE X(130).	C98970
15100	FD	OUT-PRINT-ISC		C98970
15120		RECORDING MODE IS F		C98970
15130		BLOCK CONTAINS 15 RECORDS		C98970
15140		RECORD CONTAINS 130	CHARACTERS	C98970
15150		LABEL RECORDS ARE OMITTED		C98970
15160		DATA RECORDS ARE ISC-DATA.		C98970
15170	01	ISC-DATA SYNC	PICTURE X(130).	C98970
30000		WORKING-STORAGE SECTION.		C98970
30010	77	ISCHRONAL SYNC	PICTURE X.	C98970
30020	77	WDC-TEMP SYNC	PICTURE X.	C98970
30040	77	WEEK-TEMP SYNC	PICTURE 999.	C98970
30050	77	KNT SYNC COMPUTATIONAL	PICTURE S999.	C98970
30060	77	CUR-SN	PICTURE X(8) VALUE SPACE.	C98970
30070	77	P-WEEK	PICTURE S999 COMPUTATIONAL.	C98970
30080	77	P-FLT-HRS	PICTURE S9(6) COMPUTATIONAL.	C98970
30100	77	NO-WUC SYNC	PICTURE 9999 VALUE ZERO.	C98970
30170	77	CNT SYNC COMPUTATIONAL	PICTURE S999.	C98970
30400	77	ISC-TEMP SYNC	PICTURE X(8) VALUE SPACE.	C98970
30410	77	PREV-TESTED-SN SYNC	PICTURE X(8) VALUE SPACE.	C98970
30420	77	ISC-FLAG SYNC	PICTURE X VALUE SPACE.	C98970
30430	77	MIN-ISC-WEEK SYNC COMPUTATIONAL	PICTURE S999 VALUE <999.	C98970
30500	77	TEMP-WUC SYNC	PICTURE X(5).	C98970
30510	77	TEMP-COL-NO SYNC	PICTURE S99 COMPUTATIONAL.	C98970
30520	77	NO-WDC-COLS COMPUTATIONAL	PICTURE S999 SYNC VALUE <21.	C98970
30530	77	BF COMPUTATIONAL	PICTURE S999 SYNC VALUE <23.	C98970
30540	77	ONE SYNC	PICTURE X VALUE 111.	C98970
30550	77	TWO SYNC	PICTURE X VALUE 121.	C98970
30560	77	POS-WUC COMPUTATIONAL	PICTURE S999.	C98970
30570	77	ISC-TITLE-FLAG SYNC	PICTURE X.	C98970
30580	77	NI-TITLE-FLAG SYNC	PICTURE X.	C98970
30590	77	NI-LINE-FLAG SYNC	PICTURE X.	C98970
30600	77	ISC-LINE-FLAG SYNC	PICTURE X.	C98970
30610	77	PAGE-NUMBER-ISC	PICTURE S99 SYNC VALUE ZERO.	C98970
30615	77	PAGE-NUMBER-NI	PICTURE S99 SYNC VALUE ZERO.	C98970
30620	77	NO-REC-PRINT-ISC	PICTURE 9(7) VALUE ZERO.	C98970
30630	77	NO-REC-PRINT-NI	PICTURE 9(7) VALUE ZERO.	C98970
30640	77	NO-REC-TAPE	PICTURE 9(7) VALUE ZERO.	C98970
30650	77	NO-REC-TAPE-T1	PICTURE 9(7) VALUE ZERO.	C98970
30660	77	LINE-CNT-ISC COMPUTATIONAL	PICTURE S999 SYNC.	C98970
30670	77	LINE-CNT-NI COMPUTATIONAL	PICTURE S999 SYNC.	C98970
30680	77	LINE-PAGE COMPUTATIONAL	PICTURE S999 VALUE <60 SYNC.	C98970
30682	77	SUM-INDEX COMPUTATIONAL	PICTURE S999 VALUE ZERO SYNC.	C98970
30684	77	TEMP-INDEX COMPUTATIONAL	PICTURE S999 VALUE ZERO SYNC.	C98970
30686	77	NUMBER-SGWUC COMPUTATIONAL	PICTURE S999 VALUE ZERO SYNC.	C98970
30688	77	TWO-DIGIT-COL COMPUTATIONAL	PICTURE S999 VALUE ZERO SYNC.	C98970
30700	01	WDC-FREQ-LINE-RPT SYNC.		C98970
30710	02	FILLER	PICTURE X(18) VALUE	C98970
30720			:J WDC FREQUENCY 1.	C98970
30730	02	WUC-FREQ-RPT OCCURS 21 TIMES		C98970
30740			PICTURE ZZZZZ.	C98970
30750	02	TOTAL-WDC-FREQ-RPT	PICTURE Z(6).	C98970
30760	02	FILLER	PICTURE X VALUE 121.	C98970
31010	01	NO-ISC SYNC.		C98970
31020	02	FILLER	PICTURE XX.	C98970
31030	02	NO-ISC-AC	PICTURE S999.	C98970
31040	02	FILLER	PICTURE X(75).	C98970
31050	01	ISC-A-C SYNC.		C98970
31060	02	FILLER	PICTURE XX.	C98970
31070	02	ISC-TN	PICTURE X(0).	C98970
31080	02	FILLER	PICTURE XX.	C98970
31090	02	ISC-WK	PICTURE 999.	C98970
31100	02	FILLER	PICTURE X(65).	C98970
31200	01	FILLER SYNC.		C98970
31205	02	FILLER OCCURS 36 TIMES.		C98970
31210	03	ISC-AC-TN	PICTURE X(8).	C98970
31220	03	ISC-AC-WK COMPUTATIONAL	PICTURE S999.	C98970
31300	01	INPUT-DB SYNC.		C98970
31310	02	FILLER	PICTURE X(5).	C98970
31320	02	SERIAL-NO	PICTURE X(8).	C98970
31330	02	WEEK	PICTURE 999.	C98970
31340	02	WUC	PICTURE X(5).	C98970
31350	02	FILLER REDEFINES WUC.		C98970
31360	03	WUC-2	PICTURE XX.	C98970
31370	03	FILLER	PICTURE XXX.	C98970
31380	02	WUC	PICTURE X.	C98970
31390	02	HMC	PICTURE XXX.	C98970
31400	02	MA	PICTURE 999.	C98970
31410	02	FILLER	PICTURE X(20).	C98970
31420	02	IDENT	PICTURE X.	C98970
31430	02	FILLER	PICTURE X(4).	C98970
31432	02	FLT-HRS	PICTURE S9(6).	C98970



31434	02	FILLER	PICTURE X(11).	C98970
32000	01	REPORT-10 SYNC.		C98970
32010	02	FILLER	PICTURE X(50) VALUE	C98970
32020		159897860 TF7919-02 142-8 1 1/2		C98970
32030	02	FILLER	PICTURE X(50) VALUE SPACE.	C98970
32040	02	FILLER	PICTURE X(30) VALUE	C98970
32050		1	1.	C98970
40000	01	NEW-PAGE SYNC.		C98970
40010	02	FILLER	PICTURE X VALUE 111.	C98970
40020	02	FILLER	PICTURE X(120) VALUE SPACE.	C98970
40030	02	FILLER	PICTURE X(6) VALUE 1 PAGE1.	C98970
40040	02	PAGE-NO	PICTURE Z9.	C98970
40050	02	FILLER	PICTURE X VALUE 111.	C98970
40060	01	TITLE-LINE SYNC.		C98970
40070	02	FILLER	PICTURE X(10) VALUE 15 WUC > 1.	C98970
40080	02	CUR-WUC	PICTURE X(5) VALUE SPACE.	C98970
40090	02	FILLER	PICTURE X(5) VALUE SPACE.	C98970
40100	02	ISC-TITLE	PICTURE X(13).	C98970
40110	02	FILLER	PICTURE X(96) VALUE SPACE.	C98970
40120	02	FILLER	PICTURE X VALUE 111.	C98970
40130	01	WHEN-DISC-CODE=TITLE SYNC.		C98970
40140	05	FILLER	PICTURE X(18) VALUE	C98970
40150		1 WHEN DISC. CODE 1.		C98970
40160	05	WUC-TITLE-DATA	PICTURE X(5) OCCURS 21 TIMES.	C98970
40170	05	FILLER	PICTURE X(7) VALUE 1 11.	C98970
40200	01	SG-WUC-TITLE-1 SYNC.		C98970
40210	05	FILLER	PICTURE X(18) VALUE SPACE.	C98970
40220	05	SG-WUC-TITLE-1A	PICTURE X(80).	C98970
40230	05	SG-WUC-TITLE-1B	PICTURE X(25).	C98970
40240	05	FILLER	PICTURE X(7) VALUE 1 U 11.	C98970
40300	01	SG-WUC-TITLE-2 SYNC.		C98970
40310	05	FILLER	PICTURE X(18) VALUE	C98970
40315		1 SUPPORT	1.	C98970
40320	05	SG-WUC-TITLE-2A	PICTURE X(80).	C98970
40330	05	SG-WUC-TITLE-2B	PICTURE X(25).	C98970
40335	05	FILLER	PICTURE X(7) VALUE 1 N 11.	C98970
40350	01	SG-WUC-TITLE-3 SYNC.		C98970
40360	05	FILLER	PICTURE X(18) VALUE	C98970
40365		1 GENERAL	1.	C98970
40370	05	SG-WUC-TITLE-3A	PICTURE X(80).	C98970
40380	05	SG-WUC-TITLE-3B	PICTURE X(25).	C98970
40390	05	FILLER	PICTURE X(7) VALUE 1 S 11.	C98970
40410	01	SG-WUC-TITLE-4 SYNC.		C98970
40420	05	FILLER	PICTURE X(18) VALUE	C98970
40425		1 W.U.C.	1.	C98970
40430	05	SG-WUC-TITLE-4A	PICTURE X(80).	C98970
40440	05	SG-WUC-TITLE-4B	PICTURE X(25).	C98970
40450	05	FILLER	PICTURE X(7) VALUE 1 C 11.	C98970
40480	01	SG-WUC-TITLE-5 SYNC.		C98970
40490	05	FILLER	PICTURE X(18) VALUE SPACE.	C98970
40500	05	SG-WUC-TITLE-5A	PICTURE X(80).	C98970
40510	05	SG-WUC-TITLE-5B	PICTURE X(25).	C98970
40520	05	FILLER	PICTURE X(7) VALUE 1 H 11.	C98970
40620	01	HMC-FREQ-LINE SYNC.		C98970
40630	02	FILLER	PICTURE X(12) VALUE	C98970
40640		1/FREQ HMC > 1.		C98970
40650	02	CUM-HMC	PICTURE XXX.	C98970
40660	02	FILLER	PICTURE XXX VALUE 1 1.	C98970
40670	02	HMC-FREQ-PT	PICTURE Z(5)	C98970
40680		OCCURS 21 TIMES.		C98970
40690	02	HMC-FREQ-TOTAL-RPT	PICTURE Z(6).	C98970
40700	02	FILLER	PICTURE X VALUE 111.	C98970
40830	01	TABLE-SG-WUC-VALUES SYNC.		C98970
41092	02	SG-WUC OCCURS 14 TIMES	PICTURE X(5).	C98970
41093	02	COL-NO OCCURS 14 TIMES	PICTURE S99 COMPUTATIONAL.	C98970
41100	01	FILLER SYNC.		C98970
41105	02	TABLE-SG-WUC-FREQ-ISC.		C98970
41125	03	SG-WUC-FREQ-ISC-1	PICTURE S9(5) COMPUTATIONAL.	C98970
41126	03	SG-WUC-FREQ-ISC-2	PICTURE S9(5) COMPUTATIONAL.	C98970
41127	03	SG-WUC-FREQ-ISC-3	PICTURE S9(5) COMPUTATIONAL.	C98970
41128	03	SG-WUC-FREQ-ISC-4	PICTURE S9(5) COMPUTATIONAL.	C98970
41129	03	SG-WUC-FREQ-ISC-5	PICTURE S9(5) COMPUTATIONAL.	C98970
41130	03	SG-WUC-FREQ-ISC-6	PICTURE S9(5) COMPUTATIONAL.	C98970
41131	03	SG-WUC-FREQ-ISC-7	PICTURE S9(5) COMPUTATIONAL.	C98970
41132	03	SG-WUC-FREQ-ISC-8	PICTURE S9(5) COMPUTATIONAL.	C98970
41133	03	SG-WUC-FREQ-ISC-9	PICTURE S9(5) COMPUTATIONAL.	C98970
41134	03	SG-WUC-FREQ-ISC-10	PICTURE S9(5) COMPUTATIONAL.	C98970
41135	03	SG-WUC-FREQ-ISC-11	PICTURE S9(5) COMPUTATIONAL.	C98970
41136	03	SG-WUC-FREQ-ISC-12	PICTURE S9(5) COMPUTATIONAL.	C98970
41137	03	SG-WUC-FREQ-ISC-13	PICTURE S9(5) COMPUTATIONAL.	C98970
41138	03	SG-WUC-FREQ-ISC-14	PICTURE S9(5) COMPUTATIONAL.	C98970
41139	03	SG-WUC-FREQ-ISC-15	PICTURE S9(5) COMPUTATIONAL.	C98970
41140	03	SG-WUC-FREQ-ISC-16	PICTURE S9(5) COMPUTATIONAL.	C98970
41141	03	SG-WUC-FREQ-ISC-17	PICTURE S9(5) COMPUTATIONAL.	C98970
41142	03	SG-WUC-FREQ-ISC-18	PICTURE S9(5) COMPUTATIONAL.	C98970
41143	03	SG-WUC-FREQ-ISC-19	PICTURE S9(5) COMPUTATIONAL.	C98970
41144	03	SG-WUC-FREQ-ISC-20	PICTURE S9(5) COMPUTATIONAL.	C98970

41145	03	SG-WUC-FREQ-ISC-21	PICTURE S9(5) COMPUTATIONAL.	C98970
41146	02	FILLER REDEFINES TABLE-SG-WUC-FREQ-ISC.		C98970
41147	03	SG-WUC-FREQ-ISC	PICTURE S9(5) COMPUTATIONAL	C98970
41148			OCCURS 21 TIMES.	C98970
41150	02	TABLE-SG-FREQ-NI.		C98970
41170	03	SG-WUC-FREQ-NI-1	PICTURE S9(5) COMPUTATIONAL.	C98970
41171	03	SG-WUC-FREQ-NI-2	PICTURE S9(5) COMPUTATIONAL.	C98970
41172	03	SG-WUC-FREQ-NI-3	PICTURE S9(5) COMPUTATIONAL.	C98970
41173	03	SG-WUC-FREQ-NI-4	PICTURE S9(5) COMPUTATIONAL.	C98970
41174	03	SG-WUC-FREQ-NI-5	PICTURE S9(5) COMPUTATIONAL.	C98970
41175	03	SG-WUC-FREQ-NI-6	PICTURE S9(5) COMPUTATIONAL.	C98970
41176	03	SG-WUC-FREQ-NI-7	PICTURE S9(5) COMPUTATIONAL.	C98970
41177	03	SG-WUC-FREQ-NI-8	PICTURE S9(5) COMPUTATIONAL.	C98970
41178	03	SG-WUC-FREQ-NI-9	PICTURE S9(5) COMPUTATIONAL.	C98970
41179	03	SG-WUC-FREQ-NI-10	PICTURE S9(5) COMPUTATIONAL.	C98970
41180	03	SG-WUC-FREQ-NI-11	PICTURE S9(5) COMPUTATIONAL.	C98970
41181	03	SG-WUC-FREQ-NI-12	PICTURE S9(5) COMPUTATIONAL.	C98970
41182	03	SG-WUC-FREQ-NI-13	PICTURE S9(5) COMPUTATIONAL.	C98970
41183	03	SG-WUC-FREQ-NI-14	PICTURE S9(5) COMPUTATIONAL.	C98970
41184	03	SG-WUC-FREQ-NI-15	PICTURE S9(5) COMPUTATIONAL.	C98970
41185	03	SG-WUC-FREQ-NI-16	PICTURE S9(5) COMPUTATIONAL.	C98970
41186	03	SG-WUC-FREQ-NI-17	PICTURE S9(5) COMPUTATIONAL.	C98970
41187	03	SG-WUC-FREQ-NI-18	PICTURE S9(5) COMPUTATIONAL.	C98970
41188	03	SG-WUC-FREQ-NI-19	PICTURE S9(5) COMPUTATIONAL.	C98970
41189	03	SG-WUC-FREQ-NI-20	PICTURE S9(5) COMPUTATIONAL.	C98970
41190	03	SG-WUC-FREQ-NI-21	PICTURE S9(5) COMPUTATIONAL.	C98970
41191	02	FILLER REDEFINES TABLE-SG-FREQ-NI.		C98970
41192	03	SG-WUC-FREQ-NI	PICTURE S9(5) COMPUTATIONAL	C98970
41193			OCCURS 21 TIMES.	C98970
41200	01	TAPE-OUT-ISC SYNC.		C98970
41210	02	FILLER	PICTURE X VALUE 1H1.	C98970
41220	02	FILLER	PICTURE X VALUE SPACE.	C98970
41230	02	CUR-WUC-ISC	PICTURE X(5).	C98970
41240	02	FILLER	PICTURE X VALUE SPACE.	C98970
41250	02	CUR-HMC-ISC	PICTURE XXX.	C98970
41260	02	FILLER	PICTURE X VALUE SPACE.	C98970
41280	02	LIST-HMC-ISC.		C98970
41290	03	HMC-ISC-1	PICTURE S9(5).	C98970
41300	03	HMC-ISC-2	PICTURE S9(5).	C98970
41310	03	HMC-ISC-3	PICTURE S9(5).	C98970
41320	03	HMC-ISC-4	PICTURE S9(5).	C98970
41330	03	HMC-ISC-5	PICTURE S9(5).	C98970
41340	03	HMC-ISC-6	PICTURE S9(5).	C98970
41350	03	HMC-ISC-7	PICTURE S9(5).	C98970
41360	03	HMC-ISC-8	PICTURE S9(5).	C98970
41370	03	HMC-ISC-9	PICTURE S9(5).	C98970
41380	03	HMC-ISC-10	PICTURE S9(5).	C98970
41390	03	HMC-ISC-11	PICTURE S9(5).	C98970
41400	03	HMC-ISC-12	PICTURE S9(5).	C98970
41410	03	HMC-ISC-13	PICTURE S9(5).	C98970
41420	03	HMC-ISC-14	PICTURE S9(5).	C98970
41430	03	HMC-ISC-15	PICTURE S9(5).	C98970
41440	03	HMC-ISC-16	PICTURE S9(5).	C98970
41450	03	HMC-ISC-17	PICTURE S9(5).	C98970
41460	03	HMC-ISC-18	PICTURE S9(5).	C98970
41470	03	HMC-ISC-19	PICTURE S9(5).	C98970
41480	03	HMC-ISC-20	PICTURE S9(5).	C98970
41490	03	HMC-ISC-21	PICTURE S9(5).	C98970
41491	02	FILLER REDEFINES LIST-HMC-ISC.		C98970
41492	03	HMC-ISC OCCURS 21 TIMES	PICTURE S9(5).	C98970
41500	02	HMC-FREQ-TOTAL-ISC	PICTURE S9(6).	C98970
41510	02	FILLER	PICTURE X(7) VALUE 1 1 #1.	C98970
41600	01	TAPE-OUT-NI SYNC.		C98970
41610	02	FILLER	PICTURE X VALUE 1H1.	C98970
41620	02	FILLER	PICTURE X VALUE SPACE.	C98970
41630	02	CUR-WUC-NI	PICTURE X(5).	C98970
41640	02	FILLER	PICTURE X VALUE SPACE.	C98970
41650	02	CUR-HMC-NI	PICTURE XXX.	C98970
41660	02	FILLER	PICTURE X VALUE SPACE.	C98970
41680	02	LIST-HMC-NI.		C98970
41690	03	HMC-NI-1	PICTURE S9(5).	C98970
41700	03	HMC-NI-2	PICTURE S9(5).	C98970
41710	03	HMC-NI-3	PICTURE S9(5).	C98970
41720	03	HMC-NI-4	PICTURE S9(5).	C98970
41730	03	HMC-NI-5	PICTURE S9(5).	C98970
41740	03	HMC-NI-6	PICTURE S9(5).	C98970
41750	03	HMC-NI-7	PICTURE S9(5).	C98970
41760	03	HMC-NI-8	PICTURE S9(5).	C98970
41770	03	HMC-NI-9	PICTURE S9(5).	C98970
41780	03	HMC-NI-10	PICTURE S9(5).	C98970
41790	03	HMC-NI-11	PICTURE S9(5).	C98970
41800	03	HMC-NI-12	PICTURE S9(5).	C98970
41810	03	HMC-NI-13	PICTURE S9(5).	C98970
41820	03	HMC-NI-14	PICTURE S9(5).	C98970
41830	03	HMC-NI-15	PICTURE S9(5).	C98970
41840	03	HMC-NI-16	PICTURE S9(5).	C98970
41850	03	HMC-NI-17	PICTURE S9(5).	C98970

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44100	01	SG-WUC-FREQ-LINE-3-ISC SYNC.			C98970
44110	02	FILLER	PICTURE X(18) VALUE		C98970
44120		//SUPPORT	:		C98970
44130	02	SG-WUC-ISC-3	PICTURE X(5) OCCURS 21 TIMES.		C98970
44140	02	FILLER	PICTURE X(7) VALUE :	#1.	C98970
44150	01	SG-WUC-FREQ-LINE-4-ISC SYNC.			C98970
44160	02	FILLER	PICTURE X(18) VALUE		C98970
44170		// GENERAL	:		C98970
44180	02	SG-WUC-ISC-4	PICTURE X(5) OCCURS 21 TIMES.		C98970
44190	02	FILLER	PICTURE X(7) VALUE :	#1.	C98970
44200	01	SG-WUC-FREQ-LINE-5-ISC SYNC.			C98970
44210	02	FILLER	PICTURE X(18) VALUE		C98970
44220		// W.U.C.	:		C98970
44230	02	SG-WUC-ISC-5	PICTURE X(5) OCCURS 21 TIMES.		C98970
44240	02	FILLER	PICTURE X(7) VALUE :	#1.	C98970
44250	01	SG-WUC-FREQ-LINE-6-ISC SYNC.			C98970
44260	02	FILLER	PICTURE X(18) VALUE		C98970
44270		//S FREQUENCY	:		C98970
44280	02	SG-WUC-ISC-6	PICTURE X(5) OCCURS 21 TIMES.		C98970
44290	02	FILLER	PICTURE X(7) VALUE :	#1.	C98970
44300	01	SG-WUC-FREQ-LINE-1-NI SYNC.			C98970
44310	02	FILLER	PICTURE X(18) VALUE		C98970
44320		//	:		C98970
44330	02	SG-WUC-NI-1	PICTURE X(5) OCCURS 21 TIMES.		C98970
44340	02	FILLER	PICTURE X(7) VALUE :	#1.	C98970
44350	01	SG-WUC-FREQ-LINE-2-NI SYNC.			C98970
44360	02	FILLER	PICTURE X(18) VALUE		C98970
44370		//	:		C98970
44380	02	SG-WUC-NI-2	PICTURE X(5) OCCURS 21 TIMES.		C98970
44390	02	FILLER	PICTURE X(7) VALUE :	#1.	C98970
44400	01	SG-WUC-FREQ-LINE-3-NI SYNC.			C98970
44410	02	FILLER	PICTURE X(18) VALUE		C98970
44420		//SUPPORT	:		C98970
44430	02	SG-WUC-NI-3	PICTURE X(5) OCCURS 21 TIMES.		C98970
44440	02	FILLER	PICTURE X(7) VALUE :	#1.	C98970
44450	01	SG-WUC-FREQ-LINE-4-NI SYNC.			C98970
44460	02	FILLER	PICTURE X(18) VALUE		C98970
44470		// GENERAL	:		C98970
44480	02	SG-WUC-NI-4	PICTURE X(5) OCCURS 21 TIMES.		C98970
44490	02	FILLER	PICTURE X(7) VALUE :	#1.	C98970
44500	01	SG-WUC-FREQ-LINE-5-NI SYNC.			C98970
44510	02	FILLER	PICTURE X(18) VALUE		C98970
44520		// W.U.C.	:		C98970
44530	02	SG-WUC-NI-5	PICTURE X(5) OCCURS 21 TIMES.		C98970
44540	02	FILLER	PICTURE X(7) VALUE :	#1.	C98970
44550	01	SG-WUC-FREQ-LINE-6-NI SYNC.			C98970
44560	02	FILLER	PICTURE X(18) VALUE		C98970
44570		//S FREQUENCY	:		C98970
44580	02	SG-WUC-NI-6	PICTURE X(5) OCCURS 21 TIMES.		C98970
44590	02	FILLER	PICTURE X(7) VALUE :	#1.	C98970
44600	01	FILLER SYNC.			C98970
44610	02	TEMP-NO	PICTURE Z(6).		C98970
44620	02	FILLER REDEFINES TEMP-NO.			C98970
44630	03	TEMP-1	PICTURE X.		C98970
44640	03	TEMP-2	PICTURE X.		C98970
44650	03	TEMP-3	PICTURE X.		C98970
44660	03	TEMP-4	PICTURE X.		C98970
44670	03	TEMP-5	PICTURE X.		C98970
44680	03	TEMP-6	PICTURE X.		C98970
44700	01	TEMP-PLACE SYNC.			C98970
44710	02	FILLER	PICTURE X(4) VALUE SPACE.		C98970
44720	02	TEMP-PLACE-NO	PICTURE X.		C98970
45000	01	FILLER SYNC.			C98970
45010	05	WDC-INPUT.			C98970
45020	10	WDC-TITLE-INPUT	PICTURE X(5).		C98970
45030	10	FILLER	PICTURE X(75).		C98970
45040	05	FILLER REDEFINES WDC-INPUT.			C98970
45050	10	FILLER	PICTURE X(4).		C98970
45060	10	WDC-IN	PICTURE X.		C98970
45070	10	FILLER	PICTURE X(75).		C98970
45100	01	NUMBER-CARD SYNC.			C98970
45110	05	NUMBER-ITEMS	PICTURE 999.		C98970
45120	05	FILLER	PICTURE XX.		C98970
45130	05	INPUT-SG-CODE	PICTURE X(5).		C98970
45140	05	FILLER	PICTURE X(70).		C98970
45200	01	FILLER SYNC.			C98970
45210	05	SUM-WDC-COL	PICTURE S999 OCCURS 10 TIMES.		C98970
45300	01	TEMP-INPUT-SG-WUC SYNC.			C98970
45310	05	TEMP-SG-WUC-TITLE	PICTURE X(25).		C98970
45320	05	FILLER	PICTURE X(55).		C98970
45400	01	TWO-DIGIT-CODE SYNC.			C98970
45410	05	TWO-DIGIT	PICTURE XX.		C98970
45420	05	FILLER	PICTURE XXX.		C98970
45500	01	INTERCHANGE-COLS SYNC.			C98970
45510	05	PHIN-COL	PICTURE 999.		C98970
45520	05	SEC-COL	PICTURE 999.		C98970
45530	05	FILLER	PICTURE X(74).		C98970

45560	01	SPEC-SG-WUC-REC SYNC.		C98970
45570	05	SPEC-SG-WUC	PICTURE X(5).	C98970
45580	05	SPEC-WELK-A	PICTURE 999.	C98970
45590	05	FILLER	PICTURE X(72).	C98970
45600	01	FILLER SYNC.		C98970
45610	05	SPLC-SG-WUC-LIST	PICTURE X(5) OCCURS 10 TIMES.	C98970
45620	05	SPEC-WELK-LIST	PICTURE 999 OCCURS 10 TIMES.	C98970
45630	01	NO-SPEC-SG-WUC SYNC	PICTURE S999 COMPUTATIONAL.	C98970
45640	01	SPEC-WUC SYNC	PICTURE X(5).	C98970
45650	01	SPEC-WELK SYNC	PICTURE 999.	C98970
45660	01	SPEC-IN-EX SYNC	PICTURE S999 COMPUTATIONAL.	C98970
50000		PROCEDURE DIVISION.		C98970
50010		OPEN=FILES.		C98970
50020		OPEN INPUT IN-FILE-DR, IN-FILE-ISC, OUTPUT OUT-DATA,		C98970
50030		OUT-PRINT-ISC, OUT-PRINT-NI, OUT-TITLES.		C98970
50040		PERFORM READ-ISC-A-C THRU END-RIAC.		C98970
50045		PERFORM READ-IN-TITLE-DATA THRU END-RITD.		C98970
50047		PERFORM READ-SPEC-SG-WUC THRU END-RSSW.		C98970
50050		WRITE NI-DATA FROM REPORT-ID.		C98970
50060		WRITE ISC-DATA FROM REPORT-ID.		C98970
50070		ADD 1 TO NO-REC-PRINT-NI.		C98970
50080		ADD 1 TO NC-REC-PRINT-ISC.		C98970
50100		MOVE ZERO TO CNT.		C98970
50110		RST-SG-WUC.		C98970
50120		ADD 1 TO CNT.		C98970
50130		MOVE ZERO TO SG-WUC-FREQ-ISC (CNT).		C98970
50140		MOVE ZERO TO SG-WUC-FREQ-NI (CNT).		C98970
50150		IF CNT IS LESS THAN NO-WDC-COLS, GO TO RST-SG-WUC.		C98970
50200		MOVE 1 TO KNT.		C98970
50210		MOVE SG-WUC (KNT) TO TEMP-WUC.		C98970
50220		MOVE COL-NC (KNT) TO TEMP-COL-NO.		C98970
50230		READ-SG-WUC.		C98970
50240		READ IN-FILE-DB INTO INPUT-DB.		C98970
50250		AT END GO TO CLOSE-FILES.		C98970
50255		IF MA IS LESS THAN ZERO GO TO READ-SG-WUC.		C98970
50260		IF WUC-2 IS EQUAL TO TWO-DIGIT PERFORM PROC-2-DIG-WUC.		C98970
50290		NEXT-SG-WUC.		C98970
50300		IF WUC IS LESS THAN TEMP-WUC, GO TO READ-SG-WUC.		C98970
50310		IF WUC IS EQUAL TO TEMP-WUC GO TO PROC-SG-WUC.		C98970
50320		IF WUC IS GREATER THAN 1099991 GO TO SET-TITLE-1A.		C98970
50330		ADD 1 TO KNT.		C98970
50340		IF KNT IS GREATER THAN 14 GO TO SET-TITLE-1A.		C98970
50350		MOVE SG-WUC (KNT) TO TEMP-WUC.		C98970
50360		MOVE COL-NO (KNT) TO TEMP-COL-NO.		C98970
50370		GO TO NEXT-SG-WUC.		C98970
50400		PROC-SG-WUC.		C98970
50410		PERFORM CHECK-ISCHRONAL THRU END-CI.		C98970
50411		MOVE ZERO TO SPEC-INDEX.		C98970
50412		TEST-SPLC-SG-WUC.		C98970
50413		ADD 1 TO SPEC-INDEX.		C98970
50414		IF WUC IS EQUAL TO SPEC-SG-WUC-LIST (SPEC-INDEX) GO TO		C98970
50415		PROC-SPEC-SG-WUC.		C98970
50416		IF SPEC-INDEX IS LESS THAN NO-SPEC-SG-WUC GO TO		C98970
50417		TEST-SPEC-SG-WUC.		C98970
50420		IF ISCHRONAL IS EQUAL TO ONE ADD MA TO SG-WUC-FREQ-ISC		C98970
50421		(TEMP-COL-NO).		C98970
50430		ELSE ADD MA TO SG-WUC-FREQ-NI (TEMP-COL-NO).		C98970
50440		GO TO READ-SG-WUC.		C98970
50500		PROC-2-DIG-WUC.		C98970
50510		PERFORM CHECK-ISCHRONAL THRU END-CI.		C98970
50520		IF ISCHRONAL IS EQUAL TO ONE, ADD MA TO SG-WUC-FREQ-ISC		C98970
50530		(TWO-DIGIT-COL) ELSE ADD MA TO SG-WUC-FREQ-NI		C98970
50540		(TWO-DIGIT-COL).		C98970
50600		SET-TITLE-1A.		C98970
50602		MOVE ZERO TO CNT.		C98970
50604		MOVE SG-WUC-FREQ-ISC (PRIM-COL) TO SG-WUC-FREQ-ISC (SEC-COL).		C98970
50606		SET-SG-WUC-ISC.		C98970
50608		ADD 1 TO CNT.		C98970
50610		MOVE SG-WUC-FREQ-ISC (CNT) TO TEMP-NO.		C98970
50612		MOVE TEMP-1 TO TEMP-PLACE-NO.		C98970
50614		MOVE TEMP-PLACE TO SG-WUC-ISC-1 (CNT).		C98970
50616		MOVE TEMP-2 TO TEMP-PLACE-NO.		C98970
50618		MOVE TEMP-PLACE TO SG-WUC-ISC-2 (CNT).		C98970
50620		MOVE TEMP-3 TO TEMP-PLACE-NO.		C98970
50622		MOVE TEMP-PLACE TO SG-WUC-ISC-3 (CNT).		C98970
50624		MOVE TEMP-4 TO TEMP-PLACE-NO.		C98970
50626		MOVE TEMP-PLACE TO SG-WUC-ISC-4 (CNT).		C98970
50628		MOVE TEMP-5 TO TEMP-PLACE-NO.		C98970
50630		MOVE TEMP-PLACE TO SG-WUC-ISC-5 (CNT).		C98970
50632		MOVE TEMP-6 TO TEMP-PLACE-NO.		C98970
50634		MOVE TEMP-PLACE TO SG-WUC-ISC-6 (CNT).		C98970
50636		IF CNT IS LESS THAN NO-WDC-COLS GO TO SET-SG-WUC-ISC.		C98970
50640		MOVE SG-WUC-FREQ-NI (PRIM-COL) TO SG-WUC-FREQ-NI (SEC-COL).		C98970
50642		MOVE ZERO TO CNT.		C98970

50644	SET-SG-WUC-NI.	C98970
50646	ADD 1 TO CNT.	C98970
50648	MOVE SG-WUC-FREQ-NI [CNT] TO TEMP-NO.	C98970
50650	MOVE TEMP-1 TO TEMP-PLACE-NO.	C98970
50652	MOVE TEMP-PLACE TO SG-WUC-NI-1 [CNT].	C98970
50654	MOVE TEMP-1 TO TEMP-PLACE-NO.	C98970
50656	MOVE TEMP-PLACE TO SG-WUC-NI-2 [CNT].	C98970
50658	MOVE TEMP-3 TO TEMP-PLACE-NO.	C98970
50660	MOVE TEMP-PLACE TO SG-WUC-NI-3 [CNT].	C98970
50662	MOVE TEMP-1 TO TEMP-PLACE-NO.	C98970
50664	MOVE TEMP-PLACE TO SG-WUC-NI-4 [CNT].	C98970
50666	MOVE TEMP-5 TO TEMP-PLACE-NO.	C98970
50668	MOVE TEMP-PLACE TO SG-WUC-NI-5 [CNT].	C98970
50670	MOVE TEMP-6 TO TEMP-PLACE-NO.	C98970
50672	MOVE TEMP-PLACE TO SG-WUC-NI-6 [CNT].	C98970
50674	IF CNT IS LESS THAN NO-WDC-COLS GO TO SET-SG-WUC-NI.	C98970
50700	NOTE STORE TITLE FOR USE LATER.	C98970
50710	MOVE PAGE-NUMBER-NI TO PAGE-NO.	C98970
50720	MOVL : NON-ISO : TO ISC-TITLE.	C98970
50730	WRITE TAPE-FILE-TI FROM NEW-PAGE.	C98970
50740	WRITE TAPE-FILE-TI FROM TITLE-LINE.	C98970
50750	WRITE TAPE-FILE-TI FROM WHEN-OISC-CODE-TITLE.	C98970
50760	WRITE TAPE-FILE-TI FROM SG-WUC-TITLE-1.	C98970
50770	WRITE TAPE-FILE-TI FROM SG-WUC-TITLE-2.	C98970
50780	WRITE TAPE-FILE-TI FROM SG-WUC-TITLE-3.	C98970
50790	WRITE TAPE-FILE-TI FROM SG-WUC-TITLE-4.	C98970
50800	WRITE TAPE-FILE-TI FROM SG-WUC-TITLE-5.	C98970
50810	WRITE TAPE-FILE-TI FROM SG-WUC-FREQ-LINE-1-NI.	C98970
50812	WRITE TAPE-FILE-TI FROM SG-WUC-FREQ-LINE-2-NI.	C98970
50814	WRITE TAPE-FILE-TI FROM SG-WUC-FREQ-LINE-3-NI.	C98970
50816	WRITE TAPE-FILE-TI FROM SG-WUC-FREQ-LINE-4-NI.	C98970
50818	WRITE TAPE-FILE-TI FROM SG-WUC-FREQ-LINE-5-NI.	C98970
50820	WRITE TAPE-FILE-TI FROM SG-WUC-FREQ-LINE-6-NI.	C98970
50822	ADD 14 TO NO-REC-TAPE-TI.	C98970
50830	MOVE : ISOSYNCHRONAL : TO ISC-TITLE.	C98970
50840	WRITE TAPE-FILE-TI FROM TITLE-LINE.	C98970
50850	WRITE TAPE-FILE-TI FROM SG-WUC-FREQ-LINE-1-ISC.	C98970
50860	WRITE TAPE-FILE-TI FROM SG-WUC-FREQ-LINE-2-ISC.	C98970
50870	WRITE TAPE-FILE-TI FROM SG-WUC-FREQ-LINE-3-ISC.	C98970
50880	WRITE TAPE-FILE-TI FROM SG-WUC-FREQ-LINE-4-ISC.	C98970
50890	WRITE TAPE-FILE-TI FROM SG-WUC-FREQ-LINE-5-ISC.	C98970
50900	WRITE TAPE-FILE-TI FROM SG-WUC-FREQ-LINE-6-ISC.	C98970
50910	ADD 7 TO NO-REC-TAPE-TI.	C98970
51000	PERFORM RESET-HMC-LINE-NI THRU END-RESET-NI.	C98970
51005	PERFORM RESET-HMC-LINE-ISC THRU END-RESET-ISC.	C98970
51010	READ-NSG-WUC.	C98970
51020	READ IN-FILE-DB INTO INPUT-DB.	C98970
51030	AT END GO TO CLOSE-TABLE.	C98970
51040	IF IOENT 1: NOT EQUAL TO 14: GO TO READ-NSG-WUC.	C98970
51050	PERFORM PROC-WDC THRU END-PROC-WDC.	C98970
51060	IF POS-WDC IS EQUAL TO ZERO GO TO READ-NSG-WUC.	C98970
51100	NEXT-WUC.	C98970
51102	MOVL ZERO TO PAGE-NUMBER-ISC.	C98970
51104	MOVE ZERO TO PAGE-NUMBER-NI.	C98970
51110	MOVE WUC TO CUR-WUC.	C98970
51120	MOVE SPACE TO ISC-TITLE-FLAG.	C98970
51130	MOVE SPACE TO NI-TITLE-FLAG.	C98970
51140	ADD 1 TO NO-WUC.	C98970
51150	PERFORM RESET-WUC-FREQ.	C98970
51160	NEXT-HMC.	C98970
51200	MOVE HMC TO CUR-HMC.	C98970
51210	MOVE SPACE TO ISC-LINE-FLAG.	C98970
51220	MOVE SPACE TO NI-LINE-FLAG.	C98970
51230	PERFORM CHECK-ISCHRONAL THRU END-CI.	C98970
51240	IF ISCHRONAL IS EQUAL TO ONE PERFORM ADD-ISC.	C98970
51250	ELSE PERFORM ADD-NI.	C98970
51260	READ-OATA.	C98970
51310	READ IN-FILE-DB INTO INPUT-DB.	C98970
51320	AT END GO TO CLOSE-TABLE.	C98970
51330	IF IOENT 1 IS NOT EQUAL TO 14: GO TO READ-OATA.	C98970
51340	PERFORM PROC-WDC THRU END-PROC-WDC.	C98970
51350	IF POS-WDC IS EQUAL TO ZERO GO TO READ-OATA.	C98970
51360	PERFORM CHECK-ISCHRONAL THRU END-CI.	C98970
51370	IF WUC IS NOT EQUAL TO CUR-WUC GO TO OUTPUT-TABLE-END.	C98970
51380	IF HMC IS NOT EQUAL TO CUR-HMC GO TO OUTPUT-LINE.	C98970
51390	IF ISCHRONAL IS EQUAL TO ONE PERFORM ADD-ISC.	C98970
51400	ELSE PERFORM ADD-NI.	C98970
51490	GO TO READ-OATA.	C98970
51500	RESET-HMC-LINE-NI.	C98970
51510	MOVE ZERO TO CNT.	C98970
51520	RESET-HMC-LINE-1.	C98970
51530	ADD 1 TO CNT.	C98970
51540	MOVE ZERO TO HMC-NI [CNT].	C98970
51550	IF CNT IS LESS THAN NO-WDC-COLS GO TO RESET-HMC-LINE-1.	C98970
51560	END-RESULT-NI. EXIT.	C98970
51600	WRITE-TITLE-NI.	C98970
51610	ADD 1 TO PAGE-NUMBER-NI.	C98970

51620	MOVE PAGE-NUMBER-NI TO PAGE-NO.	C98970
51630	WRITE NI-DATA FROM NEW-PAGE.	C98970
51640	MOVL : NO-I-ISO : TO ISC-TITLE.	C98970
51650	WRITE NI-DATA FROM TITLE-LINE.	C98970
51660	WRITE NI-DATA FROM WHEN-DISC-CODE-TITLE.	C98970
51670	WRITE NI-DATA FROM SG-WUC-TITLE-1.	C98970
51680	WRITE NI-DATA FROM SG-WUC-TITLE-2.	C98970
51690	WRITE NI-DATA FROM SG-WUC-TITLE-3.	C98970
51700	WRITE NI-DATA FROM SG-WUC-TITLE-4.	C98970
51710	WRITE NI-DATA FROM SG-WUC-TITLE-5.	C98970
51720	WRITE NI-DATA FROM SG-WUC-FREQ-LINE-1-NI.	C98970
51722	WRITE NI-DATA FROM SG-WUC-FREQ-LINE-2-NI.	C98970
51724	WRITE NI-DATA FROM SG-WUC-FREQ-LINE-3-NI.	C98970
51725	WRITE NI-DATA FROM SG-WUC-FREQ-LINE-4-NI.	C98970
51726	WRITE NI-DATA FROM SG-WUC-FREQ-LINE-5-NI.	C98970
51727	WRITE NI-DATA FROM SG-WUC-FREQ-LINE-6-NI.	C98970
51730	ADD 14 TO NO-REC-PRINT-NI.	C98970
51740	MOVE 14 TO LINE-CNT-NI.	C98970
51800	WRITE-TITLE-ISC.	C98970
51805	ADD 1 TO PAGE-NUMBER-ISC.	C98970
51810	MOVE PAGE-NUMBER-ISC TO PAGE-NO.	C98970
51820	WRITE ISC-DATA FROM NEW-PAGE.	C98970
51830	MOVL : ISOCRONAL : TO ISC-TITLE.	C98970
51840	WRITE ISC-DATA FROM TITLE-LINE.	C98970
51850	WRITE ISC-DATA FROM WHEN-DISC-CODE-TITLE.	C98970
51860	WRITE ISC-DATA FROM SG-WUC-TITLE-1.	C98970
51870	WRITE ISC-DATA FROM SG-WUC-TITLE-2.	C98970
51880	WRITE ISC-DATA FROM SG-WUC-TITLE-3.	C98970
51890	WRITE ISC-DATA FROM SG-WUC-TITLE-4.	C98970
51900	WRITE ISC-DATA FROM SG-WUC-TITLE-5.	C98970
51910	WRITE ISC-DATA FROM SG-WUC-FREQ-LINE-1-ISC.	C98970
51912	WRITE ISC-DATA FROM SG-WUC-FREQ-LINE-2-ISC.	C98970
51914	WRITE ISC-DATA FROM SG-WUC-FREQ-LINE-3-ISC.	C98970
51915	WRITE ISC-DATA FROM SG-WUC-FREQ-LINE-4-ISC.	C98970
51916	WRITE ISC-DATA FROM SG-WUC-FREQ-LINE-5-ISC.	C98970
51917	WRITE ISC-DATA FROM SG-WUC-FREQ-LINE-6-ISC.	C98970
51920	ADD 14 TO NO-REC-PRINT-ISC.	C98970
51930	MOVE 14 TO LINE-CNT-ISC.	C98970
52000	PROC-WDC.	C98970
52010	MOVE ZERO TO POS-WDC.	C98970
52020	MOVL ZERO TO CNT.	C98970
52030	PROC-WDC-A.	C98970
52040	ADD 1 TO CNT.	C98970
52050	MOVE WDC-LIST [CNT] TO WDC-TEMP.	C98970
52060	IF WDC IS LESS THAN WDC-TEMP GO TO END-PROC-WDC.	C98970
52070	IF WDC IS EQUAL TO WDC-TEMP GO TO PROC-WDC-C.	C98970
52080	IF CNT IS LESS THAN NO-WDC-COLS GO TO PROC-WDC-A.	C98970
52100	PROC-WDC-C.	C98970
52110	MOVL CNT TO POS-WDC.	C98970
52140	END-PROC-WDC. EXIT.	C98970
52200	OUTPUT-LINE-OF-NI-DATA.	C98970
52220	MOVE ZERO TO CNT.	C98970
52230	OUTPUT-LINE-NI-A.	C98970
52240	ADD 1 TO CNT.	C98970
52250	MOVE HMC-NI [CNT] TO HMC-FREQ-RPT [CNT].	C98970
52260	IF CNT IS LESS THAN NO-WDC-COLS GO TO OUTPUT-LINE-NI-A.	C98970
52300	MOVL ZERO TO HMC-FREQ-TOTAL-NI.	C98970
52310	MOVE ZERO TO CNT.	C98970
52320	SUM-NI-COL.	C98970
52330	ADD 1 TO CNT.	C98970
52340	MOVL SUM-WDC-COL [CNT] TO TEMP-INDEX.	C98970
52350	ADD HMC-NI [TEMP-INDEX] TO HMC-FREQ-TOTAL-NI.	C98970
52360	IF CNT IS LESS THAN SUM-INDEX GO TO SUM-NI-COL.	C98970
52390	MOVE HMC-FREQ-TOTAL-NI TO HMC-FREQ-TOTAL-RPT.	C98970
52392	IF LINE-CNT-NI IS GREATER THAN LINE-PAGE	C98970
52394	PERFORM WRITE-TITLE-NI.	C98970
52400	WRITE NI-DATA FROM HMC-FREQ-LINE.	C98970
52410	ADD 1 TO NO-REC-PRINT-NI.	C98970
52415	ADD 1 TO LINE-CNT-NI.	C98970
52500	MOVE CUR-WDC TO CUR-WUC-NI.	C98970
52510	MOVL CUR-HMC TO CUR-HMC-NI.	C98970
52520	WRITE TAPE-FILE FROM TAPE-OUT-NI.	C98970
52530	ADD 1 TO NO-REC-TAPE.	C98970
52540	PERFORM RESET-HMC-LINE-NI THRU END-RESET-NI.	C98970
52590	END-OUTPUT-LINE-NI-DATA. EXIT.	C98970
52600	OUTPUT-LINE-OF-ISC-DATA.	C98970
52610	MOVE ZERO TO CNT.	C98970
52620	OUTPUT-LINE-ISC-A.	C98970
52630	ADD 1 TO CNT.	C98970
52640	MOVE HMC-ISC [CNT] TO HMC-FREQ-RPT [CNT].	C98970
52650	IF CNT IS LESS THAN NO-WDC-COLS GO TO OUTPUT-LINE-ISC-A.	C98970
52700	MOVE ZERO TO HMC-FREQ-TOTAL-ISC.	C98970
52710	MOVE ZERO TO CNT.	C98970
52720	SUM-ISC-COL.	C98970
52730	ADD 1 TO CNT.	C98970
52740	MOVE SUM-WDC-COL [CNT] TO TEMP-INDEX.	C98970
52750	ADD HMC-ISC [TEMP-INDEX] TO HMC-FREQ-TOTAL-ISC.	C98970



52760	IF CNT IS LESS THAN SUM-INDEX GO TO SUM-ISC-COL.	C98970
52790	MOVE HMC-FREQ-TOTAL-ISC TO HMC-FREQ-TOTAL-RPT.	C98970
52792	IF LINE-CNT-ISC IS GREATER THAN LINE-PAGE	C98970
52794	PERFORM WRITE-TITLE-ISC.	C98970
52800	WRITE ISC-DATA FROM HMC-FREQ-LINE.	C98970
52810	ADD I TO NO-REC-PRINT-ISC.	C98970
52820	ADD I TO LINE-CNT-ISC.	C98970
52900	MOVE CUR-WUC TO CUR-WUC-ISC.	C98970
52910	MOVE LUN-HMC TO CUR-HMC-ISC.	C98970
52920	WRITE TAPE-FILE FROM TAPE-OUT-ISC.	C98970
52930	ADD I TO NO-REC-TAPE.	C98970
52980	PERFORM RESET-HMC-LINE-ISC THRU END-RESET-ISC.	C98970
52990	END-OUTPUT-LINE-ISC-DATA. EXIT.	C98970
53000	OUTPUT-TAULL-EMU.	C98970
53010	IF NI-LINE-FLAG IS EQUAL TO SPACE GO TO OUTPUT-WDC-NI.	C98970
53020	IF NI-TITLE-FLAG IS EQUAL TO SPACE PERFORM WRITE-TITLE-NI.	C98970
53030	MOVE ONL TO NI-TITLE-FLAG.	C98970
53040	PERFORM OUTPUT-LINE-OF-NI-DATA THRU END-OUTPUT-LINE-NI-DATA.	C98970
53060	OUTPUT-WDC-NI.	C98970
53070	IF NI-TITLE-FLAG IS EQUAL TO SPACE GO TO OUTPUT-CHECK-ISC.	C98970
53100	MOVE ZERO TO TOTAL-WDC-FREQ-NI.	C98970
53110	MOVE ZERO TO CNT.	C98970
53120	SUM-NI-WDC.	C98970
53130	ADD I TO CNT.	C98970
53140	MOVE SUM-WDC-COL [CNT] TO TEMP-INDEX.	C98970
53150	ADD WDC-FREQ-NI [TEMP-INDEX] TO TOTAL-WDC-FREQ-NI.	C98970
53160	IF CNT IS LESS THAN SUM-INDEX GO TO SUM-NI-WDC.	C98970
53170	MOVE TOTAL-WDC-FREQ-NI TO TOTAL-WDC-FREQ-RPT.	C98970
53180	MOVE ZERO TO CNT.	C98970
53190	OUTPUT-A.	C98970
53200	ADD I TO CNT.	C98970
53210	MOVE WDC-FREQ-NI [CNT] TO WDC-FREQ-RPT [CNT].	C98970
53220	IF CNT IS LESS THAN NO-WDC-COLS. GO TO OUTPUT-A.	C98970
53230	WRITE NI-DATA FROM WDC-FREQ-LINE-RPT.	C98970
53235	MOVE CUR-WUC TO CUR-WUC-W-NI.	C98970
53240	WRITE TAPE-FILE FROM WDC-FREQ-DATA-NI.	C98970
53250	ADD I TO NO-REC-TAPE. ADD I TO NO-REC-PRINT-NI.	C98970
53260	OUTPUT-LINE-CHECK-ISC.	C98970
53270	IF ISC-LINE-FLAG IS EQUAL TO SPACE GO TO OUTPUT-WDC-ISC.	C98970
53280	IF ISC-TITLE-FLAG IS EQUAL TO SPACE PERFORM WRITE-TITLE-ISC.	C98970
53290	MOVE ONL TO ISC-TITLE-FLAG.	C98970
53300	PERFORM OUTPUT-LINE-OF-ISC-DATA THRU	C98970
53310	END-OUTPUT-LINE-ISC-DATA.	C98970
53320	OUTPUT-WDC-ISC.	C98970
53330	IF ISC-TITLE-FLAG IS EQUAL TO SPACE GO TO CHECK-ID.	C98970
53340	MOVE ZERO TO TOTAL-WDC-FREQ-ISC.	C98970
53345	MOVE ZERO TO CNT.	C98970
53350	SUM-ISC-WDC.	C98970
53355	ADD I TO CNT.	C98970
53360	MOVE SUM-WDC-COL [CNT] TO TEMP-INDEX.	C98970
53365	ADD WDC-FREQ-ISC [TEMP-INDEX] TO TOTAL-WDC-FREQ-ISC.	C98970
53370	IF CNT IS LESS THAN SUM-INDEX GO TO SUM-ISC-WDC.	C98970
53390	MOVE TOTAL-WDC-FREQ-ISC TO TOTAL-WDC-FREQ-RPT.	C98970
53400	MOVE ZERO TO CNT.	C98970
53410	OUTPUT-B.	C98970
53420	ADD I TO CNT.	C98970
53430	MOVE WDC-FREQ-ISC [CNT] TO WDC-FREQ-RPT [CNT].	C98970
53440	IF CNT IS LESS THAN NO-WDC-COLS GO TO OUTPUT-B.	C98970
53450	WRITE ISC-DATA FROM WDC-FREQ-LINE-RPT.	C98970
53455	MOVE CUR-WUC TO CUR-WUC-W-ISC.	C98970
53460	WRITE TAPE-FILE FROM WDC-FREQ-DATA-ISC.	C98970
53470	ADD I TO NO-REC-TAPE.	C98970
53480	ADD I TO NO-REC-PRINT-ISC.	C98970
53481	CHECK-ID.	C98970
53485	IF IDLN: IS EQUAL TO :9: GO TO CLOSE-FILES.	C98970
53490	GO TO NLXT-WUC.	C98970
53500	CLOSE-TABLE.	C98970
53510	MOVE :9: TO IOENT.	C98970
53520	GO TO OUTPUT-TABLE-END.	C98970
53700	OUTPUT-LINE.	C98970
53710	IF NI-LINE-FLAG IS EQUAL TO SPACE GO TO OUTPUT-LINE-ISC.	C98970
53720	IF NI-TITLE FLAG IS EQUAL TO SPACE PERFORM WRITE-TITLE-NI.	C98970
53730	MOVE ONL TO NI-TITLE-FLAG.	C98970
53740	PERFORM OUTPUT-LINE-OF-NI-DATA THRU END-OUTPUT-LINE-NI-DATA.	C98970
53800	OUTPUT-LINE-ISC.	C98970
53810	IF ISC-LINE-FLAG IS EQUAL TO SPACE GO TO NEXT-HMC.	C98970
53820	IF ISC-TITLE-FLAG IS EQUAL TO SPACE PERFORM WRITE-TITLE-ISC.	C98970
53830	MOVE ONL TO ISC-TITLE-FLAG.	C98970
53840	PERFORM OUTPUT-LINE-OF-ISC-DATA THRU	C98970
53850	END-OUTPUT-LINE-ISC-DATA.	C98970
53890	GO TO NLXT-HMC.	C98970
53900	RESET-HMC-LINE-ISC.	C98970
53910	MOVE ZERO TO CNT.	C98970
53920	RESET-HMC-LINE-2.	C98970
53930	ADD I TO CNT.	C98970
53940	MOVE ZERO TO HMC-ISC [CNT].	C98970



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53950 IF CNT IS LESS THAN NO-WDC-COLS GO TO RESET-HMC-LINE-2, C98970
53990 END-HESLT-ISC, EXIT. C98970
54000 ADU-NI. C98970
54010 MOVE ONE TO NI-LINE-FLAG. C98970
54020 ADD MA TO HMC-NI [POS-WDC]. C98970
54030 ADD MA TO WUC-FREQ-NI [POS-WDC]. C98970
54100 ADU-ISC. C98970
54110 MOVE ONE TO ISC-LINE-FLAG. C98970
54120 ADD MA TO HMC-ISC [POS-WDC]. C98970
54130 ADD MA TO WUC-FREQ-ISC [POS-WDC]. C98970
55000 CLOSE-FILES. C98970
55010 COMPUTE CNT > NO-REC-TAPE - NO-REC-TAPE / BF * BF. C98970
55020 IF CNT IS EQUAL TO ZERO GO TO CF-1. C98970
55030 CF-2. C98970
55040 WRITE TAPE-FILE FROM NINE. C98970
55050 ADD 1 TO CNT. C98970
55060 IF CNT IS LESS THAN BF GO TO CF-2. C98970
55070 CF-1. C98970
55080 COMPUTE CNT > NO-REC-TAPE-TI - NO-REC-TAPE-TI / BF * BF. C98970
55090 IF CNT IS EQUAL TO ZERO GO TO CF-3. C98970
55100 CF-4. C98970
55110 WRITE TAPE-FILE-TI FROM NINE. C98970
55120 ADD 1 TO CNT. C98970
55130 IF CNT IS LESS THAN BF GO TO CF-4. C98970
55140 CF-3. C98970
55150 DISPLAY : NI TITLE RECORD : NO-REC-TAPE-TI UPON CONSOLE. C98970
55160 DISPLAY : NI TAPE RECS : NO-REC-TAPE UPON CONSOLE. C98970
55165 DISPLAY : NO OF W.U.C. : NO-WUC UPON CONSOLE. C98970
55170 DISPLAY : NO ISC PRINT REC : NO-REC-PRINT-ISC UPON CONSOLE. C98970
55180 DISPLAY : NO NI PRINT REC : NO-REC-PRINT-NI UPON CONSOLE. C98970
55190 DISPLAY : END OF JOB C9897 : UPON CONSOLE. C98970
55200 CLOSE IN-FILE-DB. C98970
55220 OUT-DATA. C98970
55230 OUT-PRINT-TSC. C98970
55235 IN-FILE-ISC. C98970
55240 OUT-PRINT-NI. C98970
55250 OUT-TITLES WITH LOCK. C98970
55290 GOMACK. C98970
55400 PHUC-SPLC-SOWUC. C98970
55410 IF SERIAL-NO IS NOT EQUAL TO CUR-SN GO TO NEW-SN-SO-WUC. C98970
55420 IF WEEK - P-WEEK IS GREATER THAN SPEC-WEEK-LIST [SPEC-INDEX] C98970
55425 GO TO ENO-SG-WUC-INSP. C98970
55430 NOT-ENO-SPEC-SG-WUC-INSP. C98970
55440 MOVE WEEK TO P-WEEK. C98970
55450 MOVE FLT-HRS TO P-FLT-HRS. C98970
55460 GO TO READ-SG-WUC. C98970
55500 NEW-SN-SG-WUC. C98970
55510 IF ISCHRONAL IS EQUAL TO ONE ADD 1 TO SG-WUC-FREQ-ISC C98970
55520 [TEMP-COL-NO] ELSE ADD 1 TO SG-WUC-FREQ-NI [TEMP-COL-NO]. C98970
55530 MOVE SERIAL-NO TO CUR-SN. C98970
55540 GO TO NOT-ENO-SPEC-SG-WUC-INSP. C98970
55600 ENO-SG-WUC-INSP. C98970
55610 IF ISCHRONAL IS EQUAL TO ONE ADD 1 TO SG-WUC-FREQ-ISC C98970
55620 [TEMP-COL-NO] ELSE ADD 1 TO SG-WUC-FREQ-NI [TEMP-COL-NO]. C98970
55630 GO TO NOT-ENO-SPEC-SG-WUC-INSP. C98970
70000 READ-ISC-A-C. C98970
70010 READ IN-FILE-ISC INTO NO-TSC AT END GO TO ENO-RIAC. C98970
70020 MOVE ZERO TO KNT. C98970
70030 RIAC. C98970
70040 ADD 1 TO KNT C98970
70050 READ IN-FILE-ISC INTO ISC-A-C AT END GO TO END-RIAC. C98970
70060 MOVE ISC-TN TO ISC-AC-TN [KNT]. C98970
70070 MOVE ISC-WK TO ISC-AC-WK [KNT]. C98970
70075 IF ISC-WK IS LESS THAN MIN-ISC-WEEK MOVE ISC-WK C98970
70076 TO MIN-ISC-WEEK. C98970
70080 IF KNT IS LESS THAN NO-ISC-AC GO TO RIAC. C98970
70090 END-RIAC, EXIT. C98970
70200 CHECK-ISCHRONAL. C98970
70210 IF SERIAL-NO IS NOT EQUAL TO PREV-TESTED-SN GO TO CHECK-1-2. C98970
70220 IF ISC-FLAG IS EQUAL TO TWO GO TO ENO-CI. C98970
70230 IF ISCHRONAL IS EQUAL TO ONE AND WEEK IS NOT LESS THAN C98970
70232 MIN-ISC-WEEK, THEN GO TO ENO-CI. C98970
70240 CHECK-1-2. C98970
70250 MOVE TWO TO ISCHRONAL. C98970
70260 IF WEEK IS LESS THAN MIN-ISC-WEEK GO TO ENO-CI. C98970
70270 MOVE ZERO TO CNT. C98970
70280 CHECK-1-1. C98970
70290 ADD 1 TO CNT C98970
70300 MOVE ISC-AC-TN [CNT] TO ISC-TEMP. C98970
70310 IF SERIAL-NO IS LESS THAN ISC-TEMP GO TO CHECK-1-4. C98970
70320 IF SERIAL-NO IS EQUAL TO ISC-TEMP GO TO CHECK-1-1A. C98970
70330 IF CNT IS LESS THAN NO-ISC-AC GO TO CHECK-1-1. C98970
70340 CHECK-1-4. C98970
70350 MOVE TWO TO ISC-FLAG. C98970
70360 GO TO CHECK-1-3. C98970
70370 CHECK-1-1A. C98970
70380 MOVE ISC-AC-WK [CNT] TO WEEK-TEMP. C98970

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70390	IF WEEK-TEMP IS EQUAL TO WEEK OR WEEK IS GREATER THAN	C98970
70400	WEEK-TEMP MOVE ONE TO ISCHRONAL,	C98970
70410	MOVE ONE TO ISC-FLAG,	C98970
70430	CHECK-I-3,	C98970
70440	MOVE SERIAL-10 TO PREV-TESTED-SN,	C98970
70450	END-CI, EXIT,	C98970
70500	RESET-WUC-FREQ,	C98970
70510	MOVE ZERO TO WUC-FREQ-NI-1,	C98970
70520	MOVE ZERO TO WUC-FREQ-NI-2,	C98970
70530	MOVE ZERO TO WUC-FREQ-NI-3,	C98970
70540	MOVE ZERO TO WUC-FREQ-NI-4,	C98970
70550	MOVE ZERO TO WUC-FREQ-NI-5,	C98970
70560	MOVE ZERO TO WUC-FREQ-NI-6,	C98970
70570	MOVE ZERO TO WUC-FREQ-NI-7,	C98970
70580	MOVE ZERO TO WUC-FREQ-NI-8,	C98970
70590	MOVE ZERO TO WUC-FREQ-NI-9,	C98970
70600	MOVE ZERO TO WUC-FREQ-NI-10,	C98970
70610	MOVE ZERO TO WUC-FREQ-NI-11,	C98970
70620	MOVE ZERO TO WUC-FREQ-NI-12,	C98970
70630	MOVE ZERO TO WUC-FREQ-NI-13,	C98970
70640	MOVE ZERO TO WUC-FREQ-NI-14,	C98970
70650	MOVE ZERO TO WUC-FREQ-NI-15,	C98970
70660	MOVE ZERO TO WUC-FREQ-NI-16,	C98970
70670	MOVE ZERO TO WUC-FREQ-NI-17,	C98970
70680	MOVE ZERO TO WUC-FREQ-NI-18,	C98970
70690	MOVE ZERO TO WUC-FREQ-NI-19,	C98970
70700	MOVE ZERO TO WUC-FREQ-NI-20,	C98970
70710	MOVE ZERO TO WUC-FREQ-NI-21,	C98970
70810	MOVE ZERO TO WUC-FREQ-ISC-1,	C98970
70820	MOVE ZERO TO WUC-FREQ-ISC-2,	C98970
70830	MOVE ZERO TO WUC-FREQ-ISC-3,	C98970
70840	MOVE ZERO TO WUC-FREQ-ISC-4,	C98970
70850	MOVE ZERO TO WUC-FREQ-ISC-5,	C98970
70860	MOVE ZERO TO WUC-FREQ-ISC-6,	C98970
70870	MOVE ZERO TO WUC-FREQ-ISC-7,	C98970
70880	MOVE ZERO TO WUC-FREQ-ISC-8,	C98970
70890	MOVE ZERO TO WUC-FREQ-ISC-9,	C98970
70900	MOVE ZERO TO WUC-FREQ-ISC-10,	C98970
70910	MOVE ZERO TO WUC-FREQ-ISC-11,	C98970
70920	MOVE ZERO TO WUC-FREQ-ISC-12,	C98970
70930	MOVE ZERO TO WUC-FREQ-ISC-13,	C98970
70940	MOVE ZERO TO WUC-FREQ-ISC-14,	C98970
70950	MOVE ZERO TO WUC-FREQ-ISC-15,	C98970
70960	MOVE ZERO TO WUC-FREQ-ISC-16,	C98970
70970	MOVE ZERO TO WUC-FREQ-ISC-17,	C98970
70980	MOVE ZERO TO WUC-FREQ-ISC-18,	C98970
70990	MOVE ZERO TO WUC-FREQ-ISC-19,	C98970
71000	MOVE ZERO TO WUC-FREQ-ISC-20,	C98970
71010	MOVE ZERO TO WUC-FREQ-ISC-21,	C98970
80000	READ-IN-TITLE-0A1A,	C98970
80010	MOVE ZERO TO CNT,	C98970
80020	READ-WUC-INPUT,	C98970
80030	READ IN-FILE-ISC INTO WUC-INPUT,	C98970
80040	AT END GO TO END-RITD,	C98970
80050	ADD 1 TO CNT,	C98970
80060	MOVE WUC-IN TO WUC-LIST [CNT],	C98970
80070	MOVE WUC-TITLE-INPUT TO WUC-TITLE-DATA [CNT],	C98970
80080	IF CNT IS LESS THAN 21 GO TO READ-WUC-INPUT,	C98970
80100	READ-UNSCHEO-MAINT-COLS,	C98970
80110	READ IN-FILE-ISC INTO NUMBER-CARD,	C98970
80120	AT END GO TO END-RITD,	C98970
80130	MOVE NUMBER-ITEMS TO SUM-INDEX,	C98970
80140	MOVE ZERO TO CNT,	C98970
80150	READ-UNSCHEO-COLS,	C98970
80160	READ IN-FILE-ISC INTO NUMBER-CARD,	C98970
80170	AT END GO TO END-RITD,	C98970
80180	ADD 1 TO CNT,	C98970
80190	MOVE NUMBER-ITEMS TO SUM-WUC-COL [CNT],	C98970
80200	IF CNT IS LESS THAN SUM-INDEX GO TO READ-UNSCHEO-COLS,	C98970
80290	MOVE ZERO TO CNT,	C98970
80300	READ IN-FILE-ISC INTO NUMBER-CARD,	C98970
80310	AT END GO TO END-RITD,	C98970
80320	MOVE NUMBER-ITEMS TO NUMBER-SGWUC,	C98970
80330	READ-SGWUC-DATA,	C98970
80340	READ IN-FILE-ISC INTO NUMBER-CARD,	C98970
80350	AT END GO TO END-RITD,	C98970
80360	ADD 1 TO CNT,	C98970
80370	MOVE NUMBER-ITEMS TO COL-NO [CNT],	C98970
80380	MOVE INPUT-SG-CODE TO SG-WUC [CNT],	C98970
80390	IF CNT IS LESS THAN NUMBER-SGWUC GO TO READ-SGWUC-DATA,	C98970
80400	READ-SGWUC-TITLE-INPUT,	C98970
80410	READ IN-FILE-ISC INTO SG-WUC-TITLE-1A, AT END GO TO END-RITD,	C98970
80420	READ IN-FILE-ISC INTO SG-WUC-TITLE-2A, AT END GO TO END-RITD,	C98970
80430	READ IN-FILE-ISC INTO SG-WUC-TITLE-3A, AT END GO TO END-RITD,	C98970
80440	READ IN-FILE-ISC INTO SG-WUC-TITLE-4A, AT END GO TO END-RITD,	C98970
80450	READ IN-FILE-ISC INTO SG-WUC-TITLE-5A, AT END GO TO END-RITD,	C98970

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80460      READ IN-FILE-ISC INTO TEMP-INPUT-SGWUC AT END GO TO END-RITD, C98970
80470      MOVE TEMP-SGWUC-TITLE TO SG-WUC-TITLE-18. C98970
80480      READ IN-FILE-ISC INTO TEMP-INPUT-SGWUC AT END GO TO END-RITD. C98970
80490      MOVE TEMP-SGWUC-TITLE TO SG-WUC-TITLE-28. C98970
80500      READ IN-FILE-ISC INTO TEMP-INPUT-SGWUC AT END GO TO END-RITD. C98970
80510      MOVE TEMP-SGWUC-TITLE TO SG-WUC-TITLE-38. C98970
80520      READ IN-FILE-ISC INTO TEMP-INPUT-SGWUC AT END GO TO END-RITD. C98970
80530      MOVE TEMP-SGWUC-TITLE TO SG-WUC-TITLE-48. C98970
80540      READ IN-FILE-ISC INTO TEMP-INPUT-SGWUC AT END GO TO END-RITD, C98970
80550      MOVE TEMP-SGWUC-TITLE TO SG-WUC-TITLE-58. C98970
80600      READ-2-DIGIT-CODE. C98970
80610      READ IN-FILE-ISC INTO NUMBER-CARD, AT END GO TO END-RITD, C98970
80620      MOVE NUMBER-ITEMS TO TWO-DIGIT-COL. C98970
80630      MOVE INPUT-SG-CODE TO TWO-DIGIT-CODE. C98970
80700      READ-INTERCHANGE-COL. C98970
80710      READ IN-FILE-ISC INTO INTERCHANGE-COLS, AT END GO TO C98970
80720      END-RITD. C98970
80790      END-RITD. EXIT. C98970
80800      READ-SPEC-SG-WUC. C98970
80810      MOVE ZERO TO IO-SPEC-SG-WUC. C98970
80820      READ-SPEC. C98970
80830      READ IN-FILE-ISC INTO SPEC-SG-WUC-REC AT END GO TO END-RSSW. C98970
80840      ADD 1 TO NO-SPEC-SG-WUC. C98970
80850      MOVE SPEC-SG-WUC TO SPEC-SG-WUC-LIST (NO-SPEC-SG-WUC). C98970
80860      SUBTRACT 1 FROM SPEC-WEEK-A DIVING C98970
80870      SPEC-WEEK-LIST (NO-SPEC-SG-WUC). C98970
80880      GO TO READ-SPEC. C98970
80890      END-RSSW. EXIT. C98970
/*      PLACE COBOL SOURCE BEFORE THIS CARD
//CHG,TFGIN DU *SPACE>[CYL,11]
00000      GET TFG WANG 1440 CDS
010001 014499 REPLACE C98970 IT
TFG DT01 11 0202080

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57000236 331
57000237 331
57000243 324
57000244 331
57000254 331
58000776 324
58000901 331
59000002 331
59000003 331
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59000006 331
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59000012 331

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8 03210  
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16 03600  
21 04141  
13 0421A  
13 04210  
18 04610

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3	2	1	4
0	0	0	1

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7 12

03300 3  
03310 3  
03320 3  
03330 3  
03400 5  
03600 5

\*END

/\* PLACE TFG DATA BEFORE THIS CARD

//TPR,TU12	DU	DISP>OLD,KEEP],VOL>SER>+F1,UNIT>T+F1	T12
//TPR,TU14	DD	DISP>OLD,KEEP],VOL>SER>+F3,UNIT>T+F3	T14
//TPR,TU22	DD	DISP>OLD,KEEP],VOL>SER>+F5,UNIT>T+F5	T22
//TPR,TU24	DD	DISP>OLD,KEEP],VOL>SER>+F7,UNIT>T+F7	T24
//TPR,TU25	DD	DISP>OLD,KEEP],VOL>SER>+F8,UNIT>T+F8	T25
//TPR,TPRIN	DU	*,SPACE>[TRK,[1,1]]	

T/P DT01 10100802080  
T/P TU14 10101302130  
T/P TU22 10101302130  
T/P TU24 1100130R000  
T/P TU25 1100130R000

/\* PLACE T/P CONTROL CARDS BEFORE THIS CARD

## 6.7.2 FREQUENCY ANALYSIS SORT

```
//T9897D JOB 01:1 G WANG I,PTY>02,TPRUN>HOLD
//C9897S EXEC P9022N,W>I 19,TIME>02,ACCT>D35323007 185
//CHG.SORTIN DU DISP>KEEP,UNIT>[A+F5,2,DEFER], CT22/23 1
// DSN>E.9897441, CT22 2
// VOL>SER>[+F5,A+F5,B+F5,C+F5,D+F5,E+F5,F+F5,G+F5,H+F5, CT22 3
// I+F5,J+F5,L+F5,M+F5,N+F5,O+F5,P+F5,Q+F5,R+F5,S+F5],CT22 4
// DCB>[LRECL>0130,BLKSIZE>2900],LABEL>[NSL,RETPD>090]
//CHG.SORTOUT DD DISP>KEEP,UNIT>[A+F1,2,DEFER],DSN>A.9897444, CT12/13 1
// VOL>SER>[+F1,A+F1,B+F1,C+F1,D+F1,E+F1,F+F1,G+F1,H+F1, CT12 2
// I+F1,J+F1,L+F1,M+F1,N+F1,O+F1,P+F1,Q+F1,R+F1,S+F1],CT12 3
// DCB>[LRECL>0130,BLKSIZE>2900]
//CHG.SYSIN DD *,DCB>BLKSIZE>0080,SPACE>[TRK,[1,1]]
SORT FIELDS>[125,001,CH,A,003,003,CH,A,001,001,CH,A,009,003,CH,A], C
SIZE>E002(000
MODS E15>[E15,008,SORTLIB,N],E18>[E18,024,SORTLIB,N]
/*
```

## 6.7.3 THREE-DIGIT WUC ANALYSIS

```
//C9897D EXEC P9655L,TIME>04,ACCT>D35323007 18
//CHG.TU12 DU DISP>L,PASS],UNIT>[A+F1,2,DEFER],DSN>A.9897444, CT12/13 1
// VOL>SER>[+F1,A+F1,B+F1,C+F1,D+F1,E+F1,F+F1,G+F1,H+F1, CT12 2
// I+F1,J+F1,K+F1,L+F1,M+F1,N+F1,O+F1,P+F1,Q+F1,R+F1,S+F1] T12 3
//CHG.TU14 DU DISP>L,PASS],UNIT>[T+F3,1,DEFER],DSN>C.9897440, CT14 1
// VOL>SER>[+F3,A+F3,B+F3,C+F3,D+F3,E+F3,F+F3,G+F3,H+F3, CT14 2
// I+F3,J+F3,K+F3,L+F3,M+F3,N+F3,O+F3,P+F3,Q+F3,R+F3,S+F3] T14 3
//CHG.TU24 DU DISP>L,PASS],UNIT>[T+F7,1,DEFER],DSN>G.9897448, CT24 1
// VOL>SER>[+F7,A+F7,B+F7,C+F7,D+F7,E+F7,F+F7,G+F7,H+F7, CT24 2
// I+F7,J+F7,K+F7,L+F7,M+F7,N+F7,O+F7,P+F7,Q+F7,R+F7,S+F7] T24 3
//CHG.INPUT DU *,SPACE>[CYL,[1,1]] 1440 CDS
U0000 COMBINE COMPILE G. WANG. C98970
U1040 DATE-WRITE: 26 APR 72. C98970
U1050 REMARKS. C98970
U1060 MAINTENANCE STUDY PROGRAM 18. C98970
U1070 FREQUENCY ANALYSIS. C98970
U1080 SIMILAP TO 1A, BUT AT 3 DIGIT WUC LEVEL. C98970
U1090 TITLES ARE USED FROM 1A. C98970
U1100 INPUT SORT SEQUENCE C98970
U1110 WUC [3 DIGIT], HMC, WDC-DATA. C98970
U2000 ENVIRONMENT DIVISION. C98970
U2010 CONFIGURATION SECTION. C98970
U2020 SOURCE-COMPUTER. IBM-360. C98970
U2030 OBJECT-COMPUTER. IBM-360. C98970
U2100 INPUT-OUTPUT SECTION. C98970
U2110 FILE-CONTROL. C98970
U2160 SELECT OUT-DATA ASSIGN TO UT-S-TU12 C98970
U2170 RESERVE 1 ALTERNATE AREA. C98970
U2180 SELECT OUT-TITLES ASSIGN TO UT-S-TU14 C98970
U2190 RESERVE 1 ALTERNATE AREA. C98970
U2200 SELECT OUT-PRINT-NI ASSIGN TO UT-S-TU24 C98970
U2210 RESERVE 1 ALTERNATE AREA. C98970
U3000 DATA DIVISION. C98970
U3010 FILE SECTION. C98970
U3100 FD OUT-DATA C98970
U3120 RECORDING MODE IS F C98970
U3130 BLOCK CONTAINS 23 RECORDS C98970
U3140 RECORD CONTAINS 130 CHARACTERS C98970
U3150 LABEL RECORDS ARE OMITTED C98970
U3160 DATA RECORDS ARE TAPE-FILE. C98970
U3170 01 TAPE-FILE SYNC PICTURE XL(130). C98970
U3180 FD OUT-TITLES C98970
U3120 RECORDING MODE IS F C98970
U3130 BLOCK CONTAINS 23 RECORDS C98970
U3140 RECORD CONTAINS 130 CHARACTERS C98970
U3150 LABEL RECORDS ARE OMITTED C98970
U3160 DATA RECORDS ARE TAPE-FILE-TI. C98970
U3170 01 TAPE-FILE-TI SYNC PICTURE XL(130). C98970
U3180 FD OUT-PRINT-NI C98970
U3120 RECORDING MODE IS F C98970
U3130 BLOCK CONTAINS 15 RECORDS C98970
U3140 RECORD CONTAINS 130 CHARACTERS C98970
U3150 LABEL RECORDS ARE NI-DATA. C98970
U3160 DATA RECORDS ARE NI-DATA. C98970
U3170 01 NI-DATA SYNC PICTURE XL(130). C98970
U3000 WORKING-STORAGE SECTION. C98970
U3010 77 CURISC SYNC PICTURE X. C98970
U3020 77 CUP-WUC SYNC PICTURE XXX. C98970
U3050 77 RNT SYNC COMPUTATIONAL PICTURE S999. C98970
U3010 77 NO-WUC SYNC PICTURE 9999 VALUE ZERO. C98970
```

30170	77	CNT SYNC COMPUTATIONAL	PICTURE S999.	C98970
30520	77	NO-WDC-COLS COMPUTATIONAL	PICTURE S999 SYNC VALUE <21.	C98970
30540	77	ONE SYNC	PICTURE X VALUE 111.	C98970
30550	77	TWO SYNC	PICTURE X VALUE 121.	C98970
30560	77	NI-TITLE-FLAG SYNC	PICTURE X.	C98970
30590	77	NI-LINE-FLAG SYNC	PICTURE X.	C98970
30615	77	PAGE-NUMBER-NI	PICTURE S99 SYNC VALUE ZERO.	C98970
30630	77	NO-REC-PRINT-NI	PICTURE 9(7) VALUE ZERO.	C98970
30670	77	LINE-CHI-NI COMPUTATIONAL	PICTURE S999 SYNC.	C98970
30680	77	LINE-PAGE COMPUTATIONAL	PICTURE S999 VALUE <60 SYNC.	C98970
30700	01	WDC-FREQ-LINE-RPT SYNC.		C98970
30710	02	FILLER	PICTURE X(18) VALUE	C98970
30720			:J WDC FREQUENCY 1.	C98970
30730	02	WUC-FREQ-RPT-2	PICTURE Z(10).	C98970
30731	02	WUC-FREQ-RPT-4	PICTURE Z(10).	C98970
30732	02	WUC-FREQ-RPT-6	PICTURE Z(10).	C98970
30733	02	WUC-FREQ-RPT-8	PICTURE Z(10).	C98970
30734	02	WUC-FREQ-RPT-10	PICTURE Z(10).	C98970
30735	02	WUC-FREQ-RPT-12	PICTURE Z(10).	C98970
30736	02	WUC-FREQ-RPT-14	PICTURE Z(10).	C98970
30737	02	WUC-FREQ-RPT-16	PICTURE Z(10).	C98970
30738	02	WUC-FREQ-RPT-18	PICTURE Z(10).	C98970
30739	02	WUC-FREQ-RPT-20	PICTURE Z(10).	C98970
30740	02	TOTAL-WDC-FREQ-RPT	PICTURE Z(11).	C98970
30741	02	FILLER	PICTURE X VALUE 121.	C98970
30750	01	WDC-FREQ-LINE-2-RPT SYNC.		C98970
30751	02	FILLER	PICTURE X(13) VALUE	C98970
30752			:/	C98970
30753	02	WUC-FREQ-RPT-1	PICTURE Z(10).	C98970
30754	02	WUC-FREQ-RPT-3	PICTURE Z(10).	C98970
30755	02	WUC-FREQ-RPT-5	PICTURE Z(10).	C98970
30756	02	WUC-FREQ-RPT-7	PICTURE Z(10).	C98970
30757	02	WUC-FREQ-RPT-9	PICTURE Z(10).	C98970
30758	02	WUC-FREQ-RPT-11	PICTURE Z(10).	C98970
30759	02	WUC-FREQ-RPT-13	PICTURE Z(10).	C98970
30760	02	WUC-FREQ-RPT-15	PICTURE Z(10).	C98970
30761	02	WUC-FREQ-RPT-17	PICTURE Z(10).	C98970
30762	02	WUC-FREQ-RPT-19	PICTURE Z(10).	C98970
30763	02	WUC-FREQ-RPT-21	PICTURE Z(10).	C98970
30764	02	FILLER	PICTURE X(7) VALUE 1	C98970
32000	01	REPORT-ID SYNC.		C98970
32010	02	FILLER	PICTURE X(50) VALUE	C98970
32020		:59897860 TF7919-02	IN4-8 I 1/2	C98970
32030	02	FILLER	PICTURE X(50) VALUE SPACE.	C98970
32040	02	FILLER	PICTURE X(30) VALUE	C98970
32050		:	21.	C98970
40000	01	NEW-PAGE SYNC.		C98970
40010	02	FILLER	PICTURE X(120).	C98970
40020	02	PAGE-DATA	PICTURE X(10).	C98970
40030	02	FILLER REDEFINES PAGE-DATA.		C98970
40040	03	FILLER	PICTURE X(7).	C98970
40050	03	PAGE-NO	PICTURE Z9.	C98970
40060	03	FILLER	PICTURE X.	C98970
40070	01	TITLE-LINE-NI SYNC.		C98970
40080	02	FILLER	PICTURE X(10).	C98970
40085	02	WUC-NI	PICTURE XXX.	C98970
40090	02	FILLER	PICTURE X(117).	C98970
40100	01	TITLE-LINE-ISC SYNC.		C98970
40110	02	FILLER	PICTURE X(10).	C98970
40115	02	WUC-ISC	PICTURE XXX.	C98970
40120	02	FILLER	PICTURE X(117).	C98970
40130	01	WHEN-UISC-CODE-TITLE SYNC.		C98970
40140	02	FILLER	PICTURE X(120).	C98970
40150	02	FILLER	PICTURE X(10).	C98970
40200	01	SG-WUC-TITLE-1 SYNC.		C98970
40210	02	FILLER	PICTURE X(120).	C98970
40220	02	FILLER	PICTURE X(10).	C98970
40270	01	SG-WUC-TITLE-2 SYNC.		C98970
40280	02	FILLER	PICTURE X(120).	C98970
40290	02	FILLER	PICTURE X(10).	C98970
40340	01	SG-WUC-TITLE-3 SYNC.		C98970
40350	02	FILLER	PICTURE X(120).	C98970
40360	02	FILLER	PICTURE X(10).	C98970
40410	01	SG-WUC-TITLE-4 SYNC.		C98970
40420	02	FILLER	PICTURE X(120).	C98970
40430	02	FILLER	PICTURE X(10).	C98970
40480	01	SG-WUC-TITLE-5 SYNC.		C98970
40490	02	FILLER	PICTURE X(120).	C98970
40500	02	FILLER	PICTURE X(10).	C98970
40550	01	SG-WUC-FREQ-LINE-ISC SYNC.		C98970
40560	02	FILLER	PICTURE X(120).	C98970
40570	02	FILLER	PICTURE X(10).	C98970
40620	01	HMC-FREQ-LINE SYNC.		C98970
40630	02	FILLER	PICTURE X(12) VALUE	C98970
40640		:/FREQ HMC > 1.		C98970
40650	02	CUR-HMC	PICTURE XXX.	C98970

40660	02	FILLER	PICTURE XXX VALUE 1 1.	C98970
40670	02	HMC-FREQ-RPI	PICTURE Z(5)	C98970
40680		OCCURS 21 TIMES.		C98970
40690	02	HMC-FREQ-TOTAL-RPT	PICTURE Z(6).	C98970
40700	02	FILLER	PICTURE X VALUE 1#.	C98970
40710	01	SG-WUC-FREQ-LINE-NI SYNC.		C98970
40720	02	FILLER	PICTURE X(120).	C98970
40730	02	FILLER	PICTURE X(10).	C98970
41100	01	DATA-IN SYNC.		C98970
41110	02	IDENT	PICTURE X.	C98970
41120	02	FILLER	PICTURE X.	C98970
41130	02	WUC	PICTURE XXX.	C98970
41140	02	FILLER	PICTURE XXX.	C98970
41150	02	HMC	PICTURE XXX.	C98970
41160	02	FILLER	PICTURE X.	C98970
41170	02	LIST-HMC-IN.		C98970
41180	03	HMC-IN-1	PICTURE S9(5).	C98970
41190	03	HMC-IN-2	PICTURE S9(5).	C98970
41200	03	HMC-IN-3	PICTURE S9(5).	C98970
41210	03	HMC-IN-4	PICTURE S9(5).	C98970
41220	03	HMC-IN-5	PICTURE S9(5).	C98970
41230	03	HMC-IN-6	PICTURE S9(5).	C98970
41240	03	HMC-IN-7	PICTURE S9(5).	C98970
41250	03	HMC-IN-8	PICTURE S9(5).	C98970
41260	03	HMC-IN-9	PICTURE S9(5).	C98970
41270	03	HMC-IN-10	PICTURE S9(5).	C98970
41280	03	HMC-IN-11	PICTURE S9(5).	C98970
41290	03	HMC-IN-12	PICTURE S9(5).	C98970
41300	03	HMC-IN-13	PICTURE S9(5).	C98970
41310	03	HMC-IN-14	PICTURE S9(5).	C98970
41320	03	HMC-IN-15	PICTURE S9(5).	C98970
41330	03	HMC-IN-16	PICTURE S9(5).	C98970
41340	03	HMC-IN-17	PICTURE S9(5).	C98970
41350	03	HMC-IN-18	PICTURE S9(5).	C98970
41360	03	HMC-IN-19	PICTURE S9(5).	C98970
41370	03	HMC-IN-20	PICTURE S9(5).	C98970
41380	03	HMC-IN-21	PICTURE S9(5).	C98970
41390	02	FILLER REDEFINES LIST-HMC-IN.		C98970
41400	03	HMC-IN OCCURS 21 TIMES		C98970
41410		PICTURE S9(5).		C98970
41420	02	HMC-FP U-IN	PICTURE S9(6).	C98970
41430	02	FILLER	PICTURE X.	C98970
41440	02	ISCHRONAL	PICTURE Y.	C98970
41450	02	FILLER	PICTURE X(5).	C98970
41600	01	TAPE-OUT-NI SYNC.		C98970
41680	02	LIST-HMC-NI.		C98970
41690	03	HMC-NI-1	PICTURE S9(5).	C98970
41700	03	HMC-NI-2	PICTURE S9(5).	C98970
41710	03	HMC-NI-3	PICTURE S9(5).	C98970
41720	03	HMC-NI-4	PICTURE S9(5).	C98970
41730	03	HMC-NI-5	PICTURE S9(5).	C98970
41740	03	HMC-NI-6	PICTURE S9(5).	C98970
41750	03	HMC-NI-7	PICTURE S9(5).	C98970
41760	03	HMC-NI-8	PICTURE S9(5).	C98970
41770	03	HMC-NI-9	PICTURE S9(5).	C98970
41780	03	HMC-NI-10	PICTURE S9(5).	C98970
41790	03	HMC-NI-11	PICTURE S9(5).	C98970
41800	03	HMC-NI-12	PICTURE S9(5).	C98970
41810	03	HMC-NI-13	PICTURE S9(5).	C98970
41820	03	HMC-NI-14	PICTURE S9(5).	C98970
41830	03	HMC-NI-15	PICTURE S9(5).	C98970
41840	03	HMC-NI-16	PICTURE S9(5).	C98970
41850	03	HMC-NI-17	PICTURE S9(5).	C98970
41860	03	HMC-NI-18	PICTURE S9(5).	C98970
41870	03	HMC-NI-19	PICTURE S9(5).	C98970
41880	03	HMC-NI-20	PICTURE S9(5).	C98970
41890	03	HMC-NI-21	PICTURE S9(5).	C98970
41891	02	FILLER REDEFINES LIST-HMC-NI.		C98970
41892	03	HMC-NI OCCURS 21 TIMES	PICTURE S9(5).	C98970
41900	02	HMC-FREQ-TOTAL-NI	PICTURE S9(6).	C98970
42000	01	WDC-FREQ-DATA-NI SYNC.		C98970
42040	02	TABLE-WDC-FREQ-NI.		C98970
42050	03	WDC-FREQ-NI-1	PICTURE S9(9).	C98970
42060	03	WDC-FREQ-NI-2	PICTURE S9(9).	C98970
42070	03	WDC-FREQ-NI-3	PICTURE S9(9).	C98970
42080	03	WDC-FREQ-NI-4	PICTURE S9(9).	C98970
42090	03	WDC-FREQ-NI-5	PICTURE S9(9).	C98970
42100	03	WDC-FREQ-NI-6	PICTURE S9(9).	C98970
42110	03	WDC-FREQ-NI-7	PICTURE S9(9).	C98970
42120	03	WDC-FREQ-NI-8	PICTURE S9(9).	C98970
42130	03	WDC-FREQ-NI-9	PICTURE S9(9).	C98970
42140	03	WDC-FREQ-NI-10	PICTURE S9(9).	C98970
42150	03	WDC-FREQ-NI-11	PICTURE S9(9).	C98970
42160	03	WDC-FREQ-NI-12	PICTURE S9(9).	C98970
42170	03	WDC-FREQ-NI-13	PICTURE S9(9).	C98970
42180	03	WDC-FREQ-NI-14	PICTURE S9(9).	C98970
42190	03	WDC-FREQ-NI-15	PICTURE S9(9).	C98970





51080	PERFORM RESET-WUC-FREQ.	C98970
51090	MOVE ISLHMNAL TO CURISC.	C98970
51100	NLXI-HMC.	C98970
51110	MOVE HMC TO CLR-HMC.	C98970
51120	MOVE SPACE TO NI-LINE-FLAG.	C98970
51130	PERFORM RESET-HMC-LINE-NI THRU END-RESET-NI.	C98970
51140	GO TO ACC-HMC.	C98970
51200	READ-DATA.	C98970
51210	READ OUT-DATA INTO DATA-IN, AT END GO TO CLOSE-FILES.	C98970
51215	IF IDENT IS EQUAL TO :9: GO TO CLOSE-FILES.	C98970
51220	IF IDENT IS EQUAL TO :H: GO TO CHECK-WUC.	C98970
51230	IF IDENT IS NOT EQUAL TO :W: GO TO ERROR-1.	C98970
51240	IF NI-LINE-FLAG IS EQUAL TO ONE PERFORM OUTPUT-LINE THRU END-OL.	C98970
51250		C98970
51260	PERFORM ACCUM-WUC-DATA.	C98970
51270	GO TO READ-DATA.	C98970
51300	CHECK-WUC.	C98970
51310	IF WUC IS EQUAL TO CUR-WUC GO TO CHECK-HMC.	C98970
51320	PERFORM WHITE-WUC THRU END-WRITE-WUC.	C98970
51330	GO TO NEXT-WUC.	C98970
51400	CHECK-HMC.	C98970
51410	IF HMC IS EQUAL TO CUR-HMC GO TO ACC-HMC.	C98970
51420	PERFORM OUTPUT-LINE THRU END-OL.	C98970
51430	GO TO NEXT-HMC.	C98970
51500	RESET-HMC-LINE-NI.	C98970
51510	MOVE ZERO TO CNT.	C98970
51520	RESET-HMC-LINE-1.	C98970
51530	ADD 1 TO CNT.	C98970
51550	MOVE ZERO TO HMC-NI [CNT].	C98970
51560	IF CNT IS LESS THAN NO-WUC-COLS GO TO RESET-HMC-LINE-1.	C98970
51570	MOVE ZERO TO HMC-FREQ-TOTAL-NI.	C98970
51590	END-RESET-NI. EXI.	C98970
51600	WHITE-TITLE-NI.	C98970
51610	ADD 1 TO PAGE-NUMBER-NI.	C98970
51620	MOVE PAGE-NUMBER-NI TO PAGE-NO.	C98970
51630	WRITE NI-DATA FROM NEW-PAGE.	C98970
51635	MOVE CUR-WUC TO WUC-NI.	C98970
51640	WRITE NI-DATA FROM TITLE-LINE-NI.	C98970
51660	WRITE NI-DATA FROM WHEN-DISC-CODE-TITLE.	C98970
51670	WRITE NI-DATA FROM SG-WUC-TITLE-1.	C98970
51680	WRITE NI-DATA FROM SG-WUC-TITLE-2.	C98970
51690	WRITE NI-DATA FROM SG-WUC-TITLE-3.	C98970
51700	WRITE NI-DATA FROM SG-WUC-TITLE-4.	C98970
51710	WRITE NI-DATA FROM SG-WUC-TITLE-5.	C98970
51720	WRITE NI-DATA FROM SG-WUC-FREQ-NI-1.	C98970
51721	WRITE NI-DATA FROM SG-WUC-FREQ-NI-2.	C98970
51722	WRITE NI-DATA FROM SG-WUC-FREQ-NI-3.	C98970
51723	WRITE NI-DATA FROM SG-WUC-FREQ-NI-4.	C98970
51724	WRITE NI-DATA FROM SG-WUC-FREQ-NI-5.	C98970
51725	WRITE NI-DATA FROM SG-WUC-FREQ-NI-6.	C98970
51730	ADD 14 TO NO-REC-PRINT-NI.	C98970
51740	MOVE 14 TO LINE-CNT-NI.	C98970
51800	WRITE-TITLE-ISC.	C98970
51810	ADD 1 TO PAGE-NUMBER-NI.	C98970
51820	MOVE PAGE-NUMBER-NI TO PAGE-NO.	C98970
51830	WRITE NI-DATA FROM NEW-PAGE.	C98970
51835	MOVE CUR-WUC TO WUC-ISC.	C98970
51840	WRITE NI-DATA FROM TITLE-LINE-ISC.	C98970
51850	WRITE NI-DATA FROM WHEN-DISC-CODE-TITLE.	C98970
51860	WRITE NI-DATA FROM SG-WUC-TITLE-1.	C98970
51870	WRITE NI-DATA FROM SG-WUC-TITLE-2.	C98970
51880	WRITE NI-DATA FROM SG-WUC-TITLE-3.	C98970
51890	WRITE NI-DATA FROM SG-WUC-TITLE-4.	C98970
51900	WRITE NI-DATA FROM SG-WUC-TITLE-5.	C98970
51910	WRITE NI-DATA FROM SG-WUC-FREQ-ISC-1.	C98970
51920	WRITE NI-DATA FROM SG-WUC-FREQ-ISC-2.	C98970
51930	WRITE NI-DATA FROM SG-WUC-FREQ-ISC-3.	C98970
51940	WRITE NI-DATA FROM SG-WUC-FREQ-ISC-4.	C98970
51950	WRITE NI-DATA FROM SG-WUC-FREQ-ISC-5.	C98970
51960	WRITE NI-DATA FROM SG-WUC-FREQ-ISC-6.	C98970
51970	ADD 14 TO NO-REC-PRINT-NI.	C98970
51980	MOVE 14 TO LINE-CNT-NI.	C98970
52200	OUTPUT-LINE-OF-NI-DATA.	C98970
52220	MOVE ZERO TO CNT.	C98970
52230	OUTPUT-LINE-NI-A.	C98970
52240	ADD 1 TO CNT.	C98970
52250	MOVE HMC-NI [CNT] TO HMC-FREQ-RPT [CNT].	C98970
52260	IF CNT IS LESS THAN NO-WUC-COLS GO TO OUTPUT-LINE-NI-A.	C98970
52340	MOVE HMC-FREQ-TOTAL-NI TO HMC-FREQ-TOTAL-RPT.	C98970
52392	IF LINE-CNT-NI IS GREATER THAN LINE-PAGE AND CURISC IS EQUAL TO TWO, PERFORM WHITE-TITLE-NI.	C98970
52394	IF LINE-CNT-NI IS GREATER THAN LINE-PAGE AND CURISC IS EQUAL TO ONE, PERFORM WRITE-TITLE-ISC.	C98970
52396	WRITE NI-DATA FROM HMC-FREQ-LINE.	C98970
52400	ADD 1 TO NO-REC-PRINT-NI.	C98970
52410	ADD 1 TO LINE-CNT-NI.	C98970
52415	ADD 1 TO LINE-CNT-NI.	C98970
52420	MOVE SPACE TO NI-LINE-FLAG.	C98970

52590	END-OUTPUT-LINE-NI-0ATA. EXIT.	C98970
53100	WRITE-WUC.	C98970
53110	MOVE WUC-FREQ-NI-2 TO WUC-FREQ-RPT-2.	C98970
53120	MOVE WUC-FREQ-NI-4 TO WUC-FREQ-RPT-4.	C98970
53130	MOVE WUC-FREQ-NI-6 TO WUC-FREQ-RPT-6.	C98970
53140	MOVE WUC-FREQ-NI-8 TO WUC-FREQ-RPT-8.	C98970
53150	MOVE WUC-FREQ-NI-10 TO WUC-FREQ-RPT-10.	C98970
53160	MOVE WUC-FREQ-NI-12 TO WUC-FREQ-RPT-12.	C98970
53170	MOVE WUC-FREQ-NI-14 TO WUC-FREQ-RPT-14.	C98970
53180	MOVE WUC-FREQ-NI-16 TO WUC-FREQ-RPT-16.	C98970
53190	MOVE WUC-FREQ-NI-18 TO WUC-FREQ-RPT-18.	C98970
53200	MOVE WUC-FREQ-NI-20 TO WUC-FREQ-RPT-20.	C98970
53210	MOVE TOTAL-WUC-FREQ-NI TO TOTAL-WUC-FREQ-RPT.	C98970
53220	WRITE NI-0ATA FROM WUC-FREQ-LINE-RPT.	C98970
53230	MOVE WUC-FREQ-NI-1 TO WUC-FREQ-RPT-1.	C98970
53240	MOVE WUC-FREQ-NI-3 TO WUC-FREQ-RPT-3.	C98970
53250	MOVE WUC-FREQ-NI-5 TO WUC-FREQ-RPT-5.	C98970
53260	MOVE WUC-FREQ-NI-7 TO WUC-FREQ-RPT-7.	C98970
53270	MOVE WUC-FREQ-NI-9 TO WUC-FREQ-RPT-9.	C98970
53280	MOVE WUC-FREQ-NI-11 TO WUC-FREQ-RPT-11.	C98970
53290	MOVE WUC-FREQ-NI-13 TO WUC-FREQ-RPT-13.	C98970
53300	MOVE WUC-FREQ-NI-15 TO WUC-FREQ-RPT-15.	C98970
53310	MOVE WUC-FREQ-NI-17 TO WUC-FREQ-RPT-17.	C98970
53320	MOVE WUC-FREQ-NI-19 TO WUC-FREQ-RPT-19.	C98970
53330	MOVE WUC-FREQ-NI-21 TO WUC-FREQ-RPT-21.	C98970
53340	WRITE NI-0ATA FROM WUC-FREQ-LINE-2-RPT.	C98970
53350	ADD 2 TO NO-REC-PRINT-NI.	C98970
53390	END-WRITE-WUC. EXIT.	C98970
53700	OUTPUT-LINE.	C98970
53710	IF NI-LINE-FLAG IS EQUAL TO SPACE 00 TO END-OL.	C98970
53720	IF NI-TITLE-FLAG IS EQUAL TO SPACE AND CURISC IS EQUAL TO	C98970
53722	ONE PERFORM WRITE-TITLE-ISC.	C98970
53724	IF NI-TITLE-FLAG IS EQUAL TO SPACE AND CURISC IS EQUAL TO	C98970
53726	TWO PERFORM WRITE-TITLE-NI.	C98970
53730	MOVE ONE TO NI-TITLE-FLAG.	C98970
53740	PERFORM OUTPUT-LINE-OF-NI-0ATA THRU	C98970
53750	END-OUTPUT-LINE-NI-0ATA.	C98970
53760	MOVE SPACE TO NI-LINE-FLAG.	C98970
53790	END-OL. EXIT.	C98970
54900	ERKUR-1.	C98970
54910	DISPLAY : INPUT DATA OUT OF SEQUENCE : UPON CONSOLE.	C98970
55000	CLOSE-FILES.	C98970
55010	PERFORM WRITE-WUC.	C98970
55165	DISPLAY : NO OF W.U.C. : NO-WUC UPON CONSOLE.	C98970
55180	DISPLAY : NO NI PRINT REC : NO-REC-PRINT-NI UPON CONSOLE.	C98970
55190	DISPLAY : END OF JOB C9897 : UPON CONSOLE.	C98970
55200	CLOSE OUT-0AT/.	C98970
55240	OUT-PRINT-NI.	C98970
55250	OUT-TITLES WITH LOCK.	C98970
55290	GORACK.	C98970
61500	ACC-HMC.	C98970
61510	ADD HMC-IN-1 TO HMC-NI-1.	C98970
61520	ADD HMC-IN-2 TO HMC-NI-2.	C98970
61530	ADD HMC-IN-3 TO HMC-NI-3.	C98970
61540	ADD HMC-IN-4 TO HMC-NI-4.	C98970
61550	ADD HMC-IN-5 TO HMC-NI-5.	C98970
61560	ADD HMC-IN-6 TO HMC-NI-6.	C98970
61570	ADD HMC-IN-7 TO HMC-NI-7.	C98970
61580	ADD HMC-IN-8 TO HMC-NI-8.	C98970
61590	ADD HMC-IN-9 TO HMC-NI-9.	C98970
61600	ADD HMC-IN-10 TO HMC-NI-10.	C98970
61610	ADD HMC-IN-11 TO HMC-NI-11.	C98970
61620	ADD HMC-IN-12 TO HMC-NI-12.	C98970
61630	ADD HMC-IN-13 TO HMC-NI-13.	C98970
61640	ADD HMC-IN-14 TO HMC-NI-14.	C98970
61650	ADD HMC-IN-15 TO HMC-NI-15.	C98970
61660	ADD HMC-IN-16 TO HMC-NI-16.	C98970
61670	ADD HMC-IN-17 TO HMC-NI-17.	C98970
61680	ADD HMC-IN-18 TO HMC-NI-18.	C98970
61690	ADD HMC-IN-19 TO HMC-NI-19.	C98970
61700	ADD HMC-IN-20 TO HMC-NI-20.	C98970
61710	ADD HMC-IN-21 TO HMC-NI-21.	C98970
61720	ADD HMC-FREQ-IN TO HMC-FREQ-TOTAL-NI.	C98970
61730	MOVE ONE TO NI-LINE-FLAG.	C98970
61740	GO TO READ-0ATA.	C98970
61800	ACCUM-WUC-0ATA.	C98970
61810	ADD HMC-IN-1 TO WUC-FREQ-NI-1.	C98970
61820	ADD HMC-IN-2 TO WUC-FREQ-NI-2.	C98970
61830	ADD HMC-IN-3 TO WUC-FREQ-NI-3.	C98970
61840	ADD HMC-IN-4 TO WUC-FREQ-NI-4.	C98970
61850	ADD HMC-IN-5 TO WUC-FREQ-NI-5.	C98970
61860	ADD HMC-IN-6 TO WUC-FREQ-NI-6.	C98970
61870	ADD HMC-IN-7 TO WUC-FREQ-NI-7.	C98970
61880	ADD HMC-IN-8 TO WUC-FREQ-NI-8.	C98970
61890	ADD HMC-IN-9 TO WUC-FREQ-NI-9.	C98970
61900	ADD HMC-IN-10 TO WUC-FREQ-NI-10.	C98970
61910	ADD HMC-IN-11 TO WUC-FREQ-NI-11.	C98970

61920	ADD HMC-IN-12 TO WDC-FREQ-NI-12.	C98970
61930	ADD HMC-IN-13 TO WDC-FREQ-NI-13.	C98970
61940	ADD HMC-IN-14 TO WDC-FREQ-NI-14.	C98970
61950	ADD HMC-IN-15 TO WDC-FREQ-NI-15.	C98970
61960	ADD HMC-IN-16 TO WDC-FREQ-NI-16.	C98970
61970	ADD HMC-IN-17 TO WDC-FREQ-NI-17.	C98970
61980	ADD HMC-IN-18 TO WDC-FREQ-NI-18.	C98970
61990	ADD HMC-IN-19 TO WDC-FREQ-NI-19.	C98970
62000	ADD HMC-IN-20 TO WDC-FREQ-NI-20.	C98970
62010	ADD HMC-IN-21 TO WDC-FREQ-NI-21.	C98970
62020	ADD HMC-FREQ-14 TO TOTAL-WDC-FREQ-NI.	C98970
70500	RESET-WDC-FREQ.	C98970
70510	MOVE ZERO TO WDC-FREQ-NI-1.	C98970
70520	MOVE ZERO TO WDC-FREQ-NI-2.	C98970
70530	MOVE ZERO TO WDC-FREQ-NI-3.	C98970
70540	MOVE ZERO TO WDC-FREQ-NI-4.	C98970
70550	MOVE ZERO TO WDC-FREQ-NI-5.	C98970
70560	MOVE ZERO TO WDC-FREQ-NI-6.	C98970
70570	MOVE ZERO TO WDC-FREQ-NI-7.	C98970
70580	MOVE ZERO TO WDC-FREQ-NI-8.	C98970
70590	MOVE ZERO TO WDC-FREQ-NI-9.	C98970
70600	MOVE ZERO TO WDC-FREQ-NI-10.	C98970
70610	MOVE ZERO TO WDC-FREQ-NI-11.	C98970
70620	MOVE ZERO TO WDC-FREQ-NI-12.	C98970
70630	MOVE ZERO TO WDC-FREQ-NI-13.	C98970
70640	MOVE ZERO TO WDC-FREQ-NI-14.	C98970
70650	MOVE ZERO TO WDC-FREQ-NI-15.	C98970
70660	MOVE ZERO TO WDC-FREQ-NI-16.	C98970
70670	MOVE ZERO TO WDC-FREQ-NI-17.	C98970
70680	MOVE ZERO TO WDC-FREQ-NI-18.	C98970
70690	MOVE ZERO TO WDC-FREQ-NI-19.	C98970
70700	MOVE ZERO TO WDC-FREQ-NI-20.	C98970
70710	MOVE ZERO TO WDC-FREQ-NI-21.	C98970
70720	MOVE ZERO TO TOTAL-WDC-FREQ-NI.	C98970
/*	PLACE COBOL SOURCE BEFORE THIS CARD	
//CHG,TF01N	DD *SPACE>[CYL,[1,1]]	1440 CDS
/*	PLACE TFG DATA BEFORE THIS CARD	
//TPR,TU12	DD DISP>[OLD,KEEP],VOL>SER>+F1,UNIT>T+F1	T12
//TPR,TU14	DD DISP>[OLD,KEEP],VOL>SER>+F3,UNIT>T+F3	T14
//TPR,TU24	DD DISP>[OLD,KEEP],VOL>SER>+F7,UNIT>T+F7	T24
//TPR,TPR1N	DD *SPACE>[TRK,[1,1]]	
T/P TU12	10101302130	
T/P TU14	10101302130	
T/P TU24	1100130R000	
/*	PLACE T/P CONTROL CARDS BEFORE THIS CARD	

## 6.8 PROGRAMS FOR MANHOUR AND NOR TIME ANALYSES

### 6.8.1 PREPROCESSOR - TASK II

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//T9897N JOB 01:1 G WANG 1,PRTY>02,TYPRUN>HOLD
//C98978 EXEC P9655L,TIME>15,ACCT>D35323007
//CHG,TU14 DU DISP>[PASS],UNIT>[T+F3,1,DEFER],DSN>+C.9897416, CT14 2
// VOL>SER>[+F3,A+F3,B+F3,C+F3,D+F3,E+F3,F+F3,G+F3,H+F3, CT14 3
// 1+F3,J+F3,K+F3,L+F3,M+F3,N+F3,O+F3,P+F3,Q+F3,R+F3,S+F3] T14 3
// //CHG,TU22 DU DISP>[PASS],UNIT>[T+F5,1,DEFER],DSN>+E.9897432, CT22 1
// VOL>SER>[+F5,A+F5,B+F5,C+F5,D+F5,E+F5,F+F5,G+F5,H+F5, CT22 2
// 1+F5,J+F5,K+F5,L+F5,M+F5,N+F5,O+F5,P+F5,Q+F5,R+F5,S+F5] T22 3
// //CHG,TU24 DU UISP>[PASS],UNIT>[T+F7,1,DEFER],DSN>+G.9897429, CT24 1
// VOL>SER>[+F7,A+F7,B+F7,C+F7,D+F7,E+F7,F+F7,G+F7,H+F7, CT24 2
// 1+F7,J+F7,K+F7,L+F7,M+F7,N+F7,O+F7,P+F7,Q+F7,R+F7,S+F7] T24 3
// //CHG,INPUT DU *,SPACE>[CYL,(1:1)] 1440 CDS
00000 COMBINE COMPILE G. WANG. C98970
01040 DATE-WRITEN. 20 APR 72. C98970
01050 REMARKS. C98970
01060 PHASE 11 PRUGHAM C98970
01070 TASK 2A MANHOUR AND NOR TIME ANALYSIS. C98970
02000 ENVIRONMENT DIVISION. C98970
02010 CONFIGURATION SECTION. C98970
02020 SOURCE-COMPUTER, IBM-360. C98970
02030 OBJECT-COMPUTER, IBM-360. C98970
02100 INPUT-OUTPUT SECTION. C98970
02110 FILE-CONTROL. C98970
02120 SELECT IN-FILE-U-B ASSIGN TO UT-S-TU14 C98970
02130 RESERVE 1 ALTERNATE AREA. C98970
02140 SELECT IN-FILE-ISC ASSIGN TO DA-S-DT01 C98970
02150 RESERVE 1 ALTERNATE AREA. C98970
02160 SELECT MSG-FILE ASSIGN TO DA-S-DT02 C98970
02170 RESERVE 1 ALTERNATE AREA. C98970
02180 SELECT OUT-FILE-1 ASSIGN TO UT-S-TU24 C98970
02190 RESERVE 1 ALTERNATE AREA. C98970
02200 SELECT OUT-FILE-2 ASSIGN TO UT-S-TU22 C98970
02210 RESERVE 1 ALTERNATE AREA. C98970
10000 DATA DIVISION. C98970
10010 FILE SECTION. C98970
10100 FD IN-FILE-D-B C98970
10120 RECURRING MODE IS F C98970
10130 BLOCK CONTAINS 40 RECORDS C98970
10140 RECORD CONTAINS 70 CHARACTERS C98970
10150 LABEL RECORDS ARE OMITTED C98970
10160 DATA RECORDS ARE IN-REC-D-B. C98970
10200 01 IN-REC-U-B SYNC. C98970
10210 02 FILLER PICTURE X(70). C98970
10220 C98970
11300 FD IN-FILE-ISC C98970
11320 RECURRING MODE IS F C98970
11330 BLOCK CONTAINS 20 RECORDS C98970
11340 RECORD CONTAINS 80 CHARACTERS C98970
11350 LABEL RECORDS ARE STANDARD C98970
11360 DATA RECORDS ARE IN-REC-ISC. C98970
11400 01 IN-REC-ISC SYNC. C98970
11410 02 FILLER PICTURE X(80). C98970
12100 FD OUT-FILE-1 C98970
12120 RECURRING MODE IS F C98970
12130 BLOCK CONTAINS 40 RECORDS C98970
12140 RECORD CONTAINS 20 CHARACTERS C98970
12150 LABEL RECORDS ARE OMITTED C98970
12160 DATA RECORDS ARE OUT-REC-1. C98970
12200 01 OUT-REC-1 SYNC. C98970
12210 02 FILLER PICTURE X(20). C98970
13300 FD MSG-FILE C98970
13320 RECURRING MODE IS F C98970
13330 BLOCK CONTAINS 20 RECORDS C98970
13340 RECORD CONTAINS 80 CHARACTERS C98970
13350 LABEL RECORDS ARE STANDARD C98970
13360 DATA RECORDS ARE MSG-REC. C98970
13400 01 MSG-REC SYNC. C98970
13410 02 FILLER PICTURE X(80). C98970
14100 FD OUT-FILE-2 C98970
14120 RECURRING MODE IS F C98970
14130 BLOCK CONTAINS 40 RECORDS C98970
14140 RECORD CONTAINS 20 CHARACTERS C98970
14150 LABEL RECORDS ARE OMITTED C98970
14160 DATA RECORDS ARE OUT-REC-2. C98970
14200 01 OUT-REC-2 SYNC. C98970
14210 02 FILLER PICTURE X(20). C98970
30000 WORKING-STORAGE SECTION. C98970
30012 77 WUC-FLAG SYNC PICTURE X VALUE SPACE. C98970
30015 77 FLT-FLAG SYNC PICTURE X VALUE SPACE. C98970
30016 77 CUR-A5 SYNC PICTURE X VALUE SPACE. C98970
30017 77 DATA-65 SYNC PICTURE X VALUE SPACE. C98970
30020 77 CUR-REFK SYNC PICTURE 999. C98970

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32100	05 GAP-WK-1	PICTURE 99.	C98970
32110	05 GAP-WK-2	PICTURE 99.	C98970
32120	05 FILLER	PICTURE X(31).	C98970
50000	PROCEDURE DIVISION.		C98970
50010	OPEN-FILES.		C98970
50020	OPEN INPUT IN-FILE-D-B, IN-FILE-ISC.		C98970
50030	OPEN OUTPUT MSG-FILE.		C98970
50040	OPEN OUTPUT OUT-FILE-1, OUT-FILE-2.		C98970
50050	PERFORM READ-ISC-A-C THRU END-RIAC.		C98970
50060	READ-INITIAL.		C98970
50070	READ IN-FILE-D-B INTO DATA-BANK-INPUT,		C98970
50080	AT END GO TO CLOSE-FILES.		C98970
50100	CHECK-DATA.		C98970
50120	IF IDENT IS EQUAL TO 3 AND WUC-2 IS EQUAL TO 1031 GO TO		C98970
50130	PROC-II-1.		C98970
50140	IF IDENT IS EQUAL TO 3 AND WUC-2 IS EQUAL TO 1041 GO TO		C98970
50150	PROC-II-1.		C98970
50160	IF IDENT IS EQUAL TO 3 AND WUC-2 IS GREATER THAN 1091 GO TO		C98970
50170	PROC-II-2A.		C98970
50180	IF IDENT IS EQUAL TO 4 GO TO PROC-II-2B.		C98970
50190	GO TO READ-INITIAL.		C98970
50200	PROC-II-1.		C98970
50210	PERFORM CHECK-ISCHRONAL THRU END-CI.		C98970
50220	MOVE ISCHRONAL TO CUR-ISC.		C98970
50222	MOVE IDENT TO CUR-ID.		C98970
50230	MOVE WUC TO CURWUC.		C98970
50240	MOVE WEEK TO CURWEEK.		C98970
50250	MOVE SERIAL-NO TO CUR-SER-NO.		C98970
50251	MOVE FET-HRS TO CUR-FET-HRS.		C98970
50252	MOVE TWO TO CUR-65.		C98970
50253	IF NORM-HR LESS THAN ZERO MOVE ONE TO CUR-65.		C98970
50260	INIT-SET.		C98970
50270	MOVE ONE TO FLT-FLAG.		C98970
50271	IF WUC EQUAL TO CI-HPREFT MOVE TWO TO FLT-FLAG.		C98970
50272	IF WUC EQUAL TO CI-HPPOST MOVE TWO TO FLT-FLAG.		C98970
50273	IF WUC EQUAL TO CI-SHPOST MOVE TWO TO FLT-FLAG.		C98970
50274	COMPUTE SUM-NORM > 0.		C98970
50275	IF FLT-FLAG EQUAL TO ONE AND NORM-HR GREATER THAN ZERO		C98970
50276	MOVE NORM-HR TO SUM-NORM.		C98970
50280	MOVE MAN-HR TO SUM-MAN-HR.		C98970
50290	ACC-SET.		C98970
50300	READ IN-FILE-D-B INTO DATA-BANK-INPUT		C98970
50310	AT END GO TO CLOSE-FILES.		C98970
50315	PERFORM CHECK-ISCHRONAL THRU END-CI.		C98970
50320	IF ISCHRONAL IS NOT EQUAL TO CUR-ISC GO TO SET-BREAK.		C98970
50322	IF IDENT NOT EQUAL TO CUR-ID GO TO SET-BREAK.		C98970
50330	IF WUC NOT EQUAL TO CURWUC GO TO SET-BREAK.		C98970
50340	IF SERIAL-NO NOT EQUAL TO CUR-SER-NO GO TO SET-BREAK.		C98970
50345	MOVE TWO TO DATA-65.		C98970
50346	IF NORM-HR LESS THAN ZERO MOVE ONE TO DATA-65.		C98970
50347	GO TO CHECK-TYPE.		C98970
50348	NOT-SP-TYPE.		C98970
50350	SUBTRACT CURWEEK FROM WEEK GIVING WEEK-TEMP.		C98970
50360	IF WEEK-TEMP NOT EQUAL TO 1		C98970
50370	GO TO INTERNAL-BREAK.		C98970
50380	ADD MAN-HR TO SUM-MAN-HR.		C98970
50385	MOVE ONE TO FLT-FLAG.		C98970
50390	IF WUC EQUAL TO CI-PREFT MOVE TWO TO FLT-FLAG.		C98970
50400	IF WUC EQUAL TO CI-HPPOST MOVE TWO TO FLT-FLAG.		C98970
50410	IF WUC EQUAL TO CI-SHPOST MOVE TWO TO FLT-FLAG.		C98970
50420	IF FET-FLAG EQUAL TO ONE AND NORM-HR GREATER THAN ZERO		C98970
50421	ADD NORM-HR TO SUM-NORM.		C98970
50425	IF FLT-FLAG EQUAL TO TWO COMPUTE SUM-NORM > 0.		C98970
50440	MOVE WEEK TO CURWEEK.		C98970
50442	MOVE FET-HRS TO CUR-FET-HRS.		C98970
50443	IF CUR-65 EQUAL TO TWO OR DATA-65 EQUAL TO TWO		C98970
50444	MOVE TWO TO CUR-65.		C98970
50446	MOVE IDENT TO CUR-ID.		C98970
50450	GO TO ACC-SET.		C98970
50460	SET-BREAK.		C98970
50470	PERFORM WRITE-I THRU END-WRITE-1.		C98970
50472	COMPUTE SUM-NORM > 0.		C98970
50474	COMPUTE SUM-MAN-HR > 0.		C98970
50480	GO TO CHECK-DATA.		C98970
50490	INTERNAL-BREAK.		C98970
50500	PERFORM WRITE-I THRU END-WRITE-1.		C98970
50510	MOVE WEEK TO CURWEEK.		C98970
50512	MOVE FET-HRS TO CUR-FET-HRS.		C98970
50515	MOVE DATA-65 TO CUR-65.		C98970
50516	MOVE IDENT TO CUR-ID.		C98970
50520	GO TO INIT-SET.		C98970
50530	NOTE WRITE NORM-HR AND MAN-HR TOTALS ON OUTPUT FILE.		C98970
50540	WRITE-I.		C98970
50550	MOVE CUR-ISC TO ISC-OUT.		C98970
50560	MOVE CURWUC TO WUC-OUT.		C98970
50570	MOVE SPACE TO HMC-OUT.		C98970
50575	IF FLT-FLAG EQUAL TO TWO GO TO WRITE-I-A.		C98970

50576	IF CUR-65 EQUAL TO ONE GO TO WRITE-1-A.	C98970
50580	MOVE SUM-NORM TO OBS.	C98970
50590	MOVE ONE TO DATA-TYPE.	C98970
50600	WRITE OUT-REC-2 FROM OUT-DATA.	C98970
50610	ADD 1 TO IO-REC-2.	C98970
50615	WRITE-1-A.	C98970
50620	MOVE SUM-MAN-HR TO OBS.	C98970
50630	MOVE TWO TO DATA-TYPE.	C98970
50640	WRITE OUT-REC-2 FROM OUT-DATA.	C98970
50650	ADD 1 TO IO-REC-2.	C98970
50660	END-WRITE-1. EXIT.	C98970
51000	CHECK-TYPE.	C98970
51010	MOVE ONE TO WUC-FLAG.	C98970
51020	IF WUC EQUAL TO CI-HPF MOVE TWO TO WUC-FLAG.	C98970
51030	IF WUC EQUAL TO CI-MA1-1 MOVE TWO TO WUC-FLAG.	C98970
51040	IF WUC EQUAL TO CI-MA1-2 MOVE TWO TO WUC-FLAG.	C98970
51050	IF WUC EQUAL TO CI-MA1-3 MOVE TWO TO WUC-FLAG.	C98970
51060	IF WUC EQUAL TO CI-PERI MOVE TWO TO WUC-FLAG.	C98970
51070	IF WUC EQUAL TO CI-IRAN MOVE TWO TO WUC-FLAG.	C98970
51080	IF WUC-FLAG EQUAL TO ONE GO TO NOT-SP-TYPE.	C98970
51090	SUBTRACT CURWEEK FROM WEEK GIVING WEEK-TEMP.	C98970
51100	SP-TYPE.	C98970
51110	IF WUC LESS THAN CI-PERI AND WEEK-TEMP GREATER THAN GAP-WK-1	C98970
51111	GO TO INTERNAL-BREAK.	C98970
51120	IF WUC GREATER THAN CI-MA1-3 AND WEEK-TEMP GREATER THAN	C98970
51121	GAP-WK-2 GO TO INTERNAL-BREAK.	C98970
51132	ADD MAN-HR TO SUM-MAN-HR.	C98970
51134	IF NORM-HR GREATER THAN ZERO ADD NORM-HR TO SUM-NORM.	C98970
51140	MOVE WEEK TO CURWEEK.	C98970
51150	MOVE FLT-HRS TO CUR-FLT-HRS.	C98970
51152	IF DATA-65 EQUAL TO TWO OR CUR-65 EQUAL TO TWO	C98970
51153	MOVE TWO TO CUR-65.	C98970
51154	MOVE IDENT TO CUR-ID.	C98970
51160	GO TO ACC-SET.	C98970
55000	PROC-II-2A.	C98970
55010	PERFORM CHECK-ISCHRONAL THRU END-CI.	C98970
55020	MOVE ISCHRONAL TO CUR-ISC.	C98970
55030	MOVE WUC TO CURWUC.	C98970
55050	MOVE SERIAL-NO TO CUR-SER-NO.	C98970
55060	MOVE IDENT TO CUR-ID.	C98970
55070	PERFORM WRITE-2 THRU END-WRITE-2.	C98970
55072	MOVE TWO TO CUR-65.	C98970
55073	IF NORM-HR LESS THAN ZERO MOVE ONE TO CUR-65.	C98970
55075	SET-NEW.	C98970
55080	COMPUTE SUM-NORM > 0.	C98970
55081	IF NORM-HR GREATER THAN ZERO MOVE NORM-HR TO SUM-NORM.	C98970
55090	MOVE UNITS TO SUM-MA.	C98970
55092	IF UNITS EQUAL TO ZERO GO TO SET-FLAG.	C98970
55093	MOVE CURWUC TO WUC-OUT.	C98970
55094	MOVE CUR-ISC TO ISC-OUT.	C98970
55095	PERFORM WRITE-3 THRU END-WRITE-3.	C98970
55096	READ IN-FILE-D-B INTO DATA-BANK-INPUT AT END GO TO EOF-BRK.	C98970
55097	GO TO BREAK-1.	C98970
55100	SET-FLAG.	C98970
55130	READ IN-FILE-D-B INTO DATA-BANK-INPUT	C98970
55140	AT END GO TO EOF-BRK.	C98970
55150	PERFORM CHECK-ISCHRONAL THRU END-CI.	C98970
55160	IF IDENT EQUAL TO CUR-ID	C98970
55170	PERFORM WRITE-2 THRU END-WRITE-2.	C98970
55180	IF ISCHRONAL NOT EQUAL TO CUR-ISC GO TO BREAK-1.	C98970
55190	IF WUC NOT EQUAL TO CURWUC GO TO BREAK-1.	C98970
55200	IF SERIAL-NO NOT EQUAL TO CUR-SER-NO GO TO BREAK-1.	C98970
55210	IF IDENT NOT EQUAL TO CUR-ID GO TO BREAK-1.	C98970
55212	MOVE TWO TO DATA-65.	C98970
55213	IF NORM-HR LESS THAN ZERO MOVE ONE TO DATA-65.	C98970
55215	IF CUR-65 EQUAL TO TWO OR DATA-65 EQUAL TO TWO	C98970
55216	MOVE TWO TO CUR-65.	C98970
55220	IF NORM-HR GREATER THAN ZERO ADD NORM-HR TO SUM-NORM.	C98970
55230	ADD UNITS TO SUM-MA.	C98970
55231	IF UNITS NOT EQUAL TO ZERO GO TO INT-BREAK.	C98970
55232	GO TO SET-FLAG.	C98970
55240	INT-BREAK.	C98970
55250	MOVE CURWUC TO WUC-OUT.	C98970
55260	MOVE CUR-ISC TO ISC-OUT.	C98970
55270	PERFORM WRITE-3 THRU END-WRITE-3.	C98970
55280	COMPUTE SUM-NORM > 0.	C98970
55282	COMPUTE SUM-MA > 0.	C98970
55284	GO TO SET-FLAG.	C98970
55290	BREAK-1.	C98970
55322	COMPUTE SUM-NORM > 0.	C98970
55324	COMPUTE SUM-MA > 0.	C98970
55330	GO TO CHECK-DATA.	C98970
55390	WRITE-2.	C98970
55395	IF NORM-HR LESS THAN ZERO GO TO END-WRITE-2.	C98970
55400	MOVE ISCHRONAL TO ISC-OUT.	C98970
55410	MOVE WUC TO WUC-OUT.	C98970
55420	MOVE SPACE TO HMC-OUT.	C98970

55430	MOVE NOKS=HR TO OBS.	C98970
55440	MOVE FOUR TO DATA-TYPE.	C98970
55450	WRITE OUT=REC-2 FROM OUT-DATA.	C98970
55460	ADD 1 TO NO-REC-2.	C98970
55470	END-WRITE-2. EXIT.	C98970
55480	WRITE-3.	C98970
55482	IF CUR-65 EQUAL TO ONE GO TO END-WRITE-3.	C98970
55500	MOVE SPACE TO HMC-OUT.	C98970
55510	DIVIDE SUM-MA INTO SUM-NORM GIVING OBS.	C98970
55520	MOVE THREE TO DATA-TYPE.	C98970
55530	WRITE OUT-REC-2 FROM OUT-DATA.	C98970
55540	ADD 1 TO NO-REC-2.	C98970
55550	END-WRITE-3. EXIT.	C98970
55551	EOF-BRK.	C98970
55552	IF SUM-NORM EQUAL TO ZERO GO TO CLOSE-FILES.	C98970
55553	MOVE CURWUC TO WUC-OUT.	C98970
55554	MOVE CUR-ISC TO ISC-OUT.	C98970
55555	PERFORM WRITE-3 THRU END-WRITE-3.	C98970
55556	GO TO CLOSE-FILES.	C98970
55560	REMARK-2.	C98970
55570	NOTE COMPUTE RATIO OF MH TOTAL OVER MA TOTAL	C98970
55580	DATA BANK RECORD TYPE 4.	C98970
60000	PROC-II-2B.	C98970
60010	PERFORM CHECK-ISCHRONAL THRU END-C1.	C98970
60020	MOVE ISCHRONAL TO CUR-ISC.	C98970
60030	MOVE WUC TO CURWUC.	C98970
60050	MOVE SERIAL-NO TO CUR-SER-NO.	C98970
60060	MOVE IDENT TO CUR-ID.	C98970
60070	MOVE HMC TO CUR-HMC.	C98970
60080	SET-NEW-2.	C98970
60090	MOVE MAN-HR TO SUM-MAN-HR.	C98970
60100	MOVE UNITS TO SUM-MA.	C98970
60102	IF UNITS EQUAL TO ZERO GO TO SET-FLAG-2.	C98970
60103	PERFORM WRITE-4 THRU END-WRITE-4.	C98970
60104	READ IN-FILE-D-B INTO DATA-BANK-INPUT AT END GO TO EOF-BRK-2.	C98970
60105	GO TO BREAK-2.	C98970
60110	SET-FLAG-2.	C98970
60140	READ IN-FILE-D-B INTO DATA-BANK-INPUT	C98970
60150	AT END GO TO EOF-BRK-2.	C98970
60160	PERFORM CHECK-ISCHRONAL THRU END-C1.	C98970
60170	IF ISCHRONAL NOT EQUAL TO CUR-ISC GO TO BREAK-2.	C98970
60180	IF WUC NOT EQUAL TO CURWUC GO TO BREAK-2.	C98970
60190	IF SERIAL-NO NOT EQUAL TO CUR-SER-NO GO TO BREAK-2.	C98970
60200	IF IDENT NOT EQUAL TO CUR-ID GO TO BREAK-2.	C98970
60210	IF HMC NOT EQUAL TO CUR-HMC GO TO BREAK-2.	C98970
60220	ADD MAN-HR TO SUM-MAN-HR.	C98970
60230	ADD UNITS TO SUM-MA.	C98970
60231	IF UNITS NOT EQUAL TO ZERO GO TO INT-BREAK-2.	C98970
60232	GO TO SET-FLAG-2.	C98970
60240	INT-BREAK-2.	C98970
60250	PERFORM WRITE-4 THRU END-WRITE-4.	C98970
60260	COMPUTE SUM-MAN-HR > 0.	C98970
60262	COMPUTE SUM-MA > 0.	C98970
60264	GO TO SET-FLAG-2.	C98970
60270	BREAK-2.	C98970
60282	COMPUTE SUM-MAN-HR > 0.	C98970
60284	COMPUTE SUM-MA > 0.	C98970
60290	GO TO CHECK-DATA.	C98970
60330	WRITE-4.	C98970
60340	MOVE CURWUC TO WUC-OUT.	C98970
60350	MOVE CUR-ISC TO ISC-OUT.	C98970
60360	MOVE CUR-HMC TO HMC-OUT.	C98970
60370	IF SUM-MA EQUAL TO ZERO ADD 1 TO SUM-MA.	C98970
60300	DIVIDE SUM-MA INTO SUM-MAN-HR	C98970
60390	GIVING OBS.	C98970
60400	MOVE ONE TO DATA-TYPE.	C98970
60410	WRITE OUT-REC-1 FROM OUT-DATA.	C98970
60420	ADD 1 TO NO-REC-1.	C98970
60430	END-WRITE-4. EXIT.	C98970
60440	EOF-BRK-2.	C98970
60450	IF SUM-MAN-HR EQUAL TO ZERO GO TO CLOSE-FILES.	C98970
60460	PERFORM WRITE-4 THRU END-WRITE-4.	C98970
60470	GO TO CLOSE-FILES.	C98970
70000	READ-ISC-A-C.	C98970
70005	READ IN-FILE-ISC INTO SPEC-WUC AT END GO TO END-RIAC.	C98970
70010	READ IN-FILE-ISC INTO NO-ISC AT END GO TO END-RIAC.	C98970
70020	MOVE ZERO TO KNT.	C98970
70030	RIAC.	C98970
70040	ADD 1 TO KNT.	C98970
70050	READ IN-FILE-ISC INTO ISC-A-C AT END GO TO END-RIAC.	C98970
70060	MOVE ISC-TN TO ISC-AC-TN [KNT].	C98970
70070	MOVE ISC-WK TO ISC-AC-WK [KNT].	C98970
70075	IF ISC-WK IS LESS THAN MIN-ISC-WEEK MOVE ISC-WK	C98970
70076	TO MIN-ISC-WEEK.	C98970
70080	IF KNT IS LESS THAN NO-ISC-AC GO TO RIAC.	C98970
70085	CLOSE IN-FILE-ISC WITH LOCK.	C98970
70090	END-RIAC. EXIT.	C98970



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70200 CHECK-ISCHEMUAL. C98970
70210 IF SERIAL-NO IS NOT EQUAL TO PREV-TESTED-SN GO TO CHECK-I-2. C98970
70220 IF ISC-FLAG IS EQUAL TO TWO GO TO END-CI. C98970
70230 IF ISCHRONAL IS EQUAL TO ONE AND WEEK IS NOT LESS THAN C98970
70232 MIN-ISC-WEEK, THEN GO TO END-CI. C98970
70240 CHECK-I-2. C98970
70250 MOVE TWO TO ISCHRONAL. C98970
70260 IF WEEK IS LESS THAN MIN-ISC-WEEK GO TO END-CI. C98970
70270 MOVE ZERO TO CNT. C98970
70280 CHECK-I-1. C98970
70290 ADD I TO CNT. C98970
70300 MOVE ISC-AC-TN [CNT] TO ISC-TEMP. C98970
70310 IF SERIAL-NO IS LESS THAN ISC-TEMP GO TO CHECK-I-4. C98970
70320 IF SERIAL-NO IS EQUAL TO ISC-TEMP GO TO CHECK-I-1A. C98970
70330 IF CNT IS LESS THAN NO-ISC-AC GO TO CHECK-I-1. C98970
70340 CHECK-I-4. C98970
70350 MOVE TWO TO ISC-FLAG. C98970
70360 GO TO CHECK-I-3. C98970
70370 CHECK-I-1A. C98970
70380 MOVE ISC-AC-WK [CNT] TO WEEK-TEMP. C98970
70390 IF WEEK-TEMP IS EQUAL TO WEEK OR WEEK IS GREATER THAN C98970
70400 WEEK-TEMP MOVE ONE TO ISCHRONAL. C98970
70410 MOVE ONE TO ISC-FLAG. C98970
70430 CHECK-I-3. C98970
70440 MOVE SERIAL-NO TO PREV-TESTED-SN. C98970
70450 END-CI. EXIT. C98970
70510 NINE-FILL-2. C98970
70520 WRITE OUT-REC-2 FROM NINE. C98970
70530 ADD I TO KNT. C98970
70540 IF KNT IS LESS THAN 90 GO TO NINE-FILL-2. C98970
70550 N-F-2. EXIT. C98970
70600 NINE-FILL-1. C98970
70610 WRITE OUT-REC-1 FROM NINE. C98970
70620 ADD I TO KNT. C98970
70630 IF KNT IS LESS THAN 90 GO TO NINE-FILL-1. C98970
70640 N-F-1. EXIT. C98970
71800 CLOSE-FILES. C98970
71810 COMPUTE KNT > NO-REC-1 - NO-REC-1 / 90 * 90. C98970
71820 IF KNT IS ZERO GO TO CF-2. C98970
71830 PERFORM NINE-FILL-1 THRU N-F-1. C98970
71840 CF-2. C98970
71850 COMPUTE KNT > NO-REC-2 - NO-REC-2 / 90 * 90. C98970
71860 IF KNT IS ZERO GO TO CF-3. C98970
71870 PERFORM NINE-FILL-2 THRU N-F-2. C98970
71900 CF-3. C98970
71910 DISPLAY : NUMBER RECORDS-1 : NO-REC-1 UPON CONSOLE. C98970
71920 DISPLAY : NUMBER RECORDS-2 : NO-REC-2 UPON CONSOLE. C98970
71940 DISPLAY : END OF JOB C9897: UPON CONSOLE. C98970
71950 CLOSE IN-FILE-D-B, MSG-FILE, OUT-FILE-1. C98970
71960 OUT-FILE-2 WITH LOCK. C98970
71990 GOBACK. C98970
/* PLACE COBOL SOURCE BEFORE THIS CARD
//CHG.TFGIN DD *.SPACE>[CYL,I,1]]
TFG DT01 11 020Z080
0330003310033200333003400036000310003200032100204

```

1440 CDS

```

34
57000236 331
57000237 331
57000243 324
57000244 331
57002545 331
58000776 324
59000901 331
59000002 331
59000003 331
59000005 331
59000006 331
59000010 331
59000012 331
59000015 331
59000018 331
59000019 331
59000026 331
59000030 331
59000054 324
59000057 324
59000058 324
59000059 324
59000104 331
59000105 331
59000108 324
59000110 324
59000119 324
59000141 324
59000143 324
59000144 324
59000145 324

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59000147 324
59000151 324
59000152 324
*END
/* PLACE TFG DATA BEFORE THIS CARD
//TPR,TU14 DU DISP>[OLD,KEEP],VOL>SER>+F3,UNIT>T+F3 T14
//TPR,TU22 DU DISP>[OLD,KEEP],VOL>SER>+F5,UNIT>T+F5 T22
//TPR,TU24 DU DISP>[OLD,KEEP],VOL>SER>+F7,UNIT>T+F7 T24
//TPR,TPRIN DD *.SPACE>[TRK,[1,1]]
T/P DT01 101008^2080
T/P DT02 101008^2080
T/P TU14 101007^2070
T/P TU22 101002^2020
T/P TU24 101002^2020
/* PLACE T/P CONTROL CARDS BEFORE THIS CARD

```

### 6.8.2 SORT FOR SCHEDULED NORM HOURS

```

//T9897N JOB 01: G WANG : ,PHTY>02,TYPRUN>HOLD
//C9897F EXEC P962 'N, #>060, TIME>04, ACCT>D35323007
//CHG, SORTIN DU DISP>[KEEP], UNIT>[A+F5, 2, DEFER], CT22/23 1
// DSN>+L, 9897432, CT22 2
// VOL>SER>[+F5, A+F5, B+F5, C+F5, D+F5, E+F5, F+F5, G+F5, H+F5, CT22 3
// 1+F5, J+F5, K+F5, L+F5, M+F5, N+F5, O+F5, P+F5, Q+F5, R+F5, S+F5], CT22 4
// DCB>[LRECL>0020, BLKSIZE>1800], LABEL>[NSL, RETPD>099]
//CHG, SORTOUT DU DISP>[KEEP], UNIT>[A+F1, 2, DEFER], DSN>+A, 9897430, CT12/13 1
// VOL>SER>[+F1, A+F1, B+F1, C+F1, D+F1, E+F1, F+F1, G+F1, H+F1, CT12 2
// 1+F1, J+F1, K+F1, L+F1, M+F1, N+F1, O+F1, P+F1, Q+F1, R+F1, S+F1], CT12 3
// DCB>[LRECL>0020, BLKSIZE>1800]
//CHG, SYSIN DD *.DCB>BLKSIZE>0080, SPACE>[TRK,[1,1]]
SORT FIELDS>[017, 01, CH, A, 019, 001, CH, A, 001, 005, CH, A], SIZE>E0350000
MODS E15>[E15, 008-SORTLIB, N], E18>[E18, 024-SORTLIB, N]
/*

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### 6.8.3 CUMULATIVE DISTRIBUTION FOR SCHEDULED NORM HOURS

```

//C9897C EXEC P965E., TIME>30, ACCT>D35323007
//CHG, TU12 DU DISP>[PASS], UNIT>[T+F1, 1, DEFER], DSN>+A, 9897430, CT12 1
// VOL>SER>[+F1, A+F1, B+F1, C+F1, D+F1, E+F1, F+F1, G+F1, H+F1, CT12 2
// 1+F1, J+F1, K+F1, L+F1, M+F1, N+F1, O+F1, P+F1, Q+F1, R+F1, S+F1] T12 3
//CHG, TU25 DU DISP>[PASS], UNIT>[T+F8, 1, DEFER], DSN>+H, 9897431, CT25 1
// VOL>SER>[+F8, A+F8, B+F8, C+F8, D+F8, E+F8, F+F8, G+F8, H+F8, CT25 2
// 1+F8, J+F8, K+F8, L+F8, M+F8, N+F8, O+F8, P+F8, Q+F8, R+F8, S+F8] T25 3
//CHG, INPUT DU *.SPACE>[CYL,[1,1]] 1440 CDS
00000 COMBINE COMPILE G. WANG. C98970
01040 DATE-WRITTEN. 7 APR 72. C98970
01050 REMARKS. C98970
01060 TASK 2 HIST OF WUC. C98970
02000 ENVIRONMENT DIVISION. C98970
02010 CONFIGURATION SECTION. C98970
02020 SOURCE-COMPUTER. IBM-360. C98970
02030 OBJECT-COMPUTER. IBM-360. C98970
02100 INPUT-OUTPUT SECTION. C98970
02110 FILE-CONTROL. C98970
02120 SELECT IN-FILE ASSIGN TO UT-S-TU12 C98970
02130 RESERVE 1 ALTERNATE AREA. C98970
02140 SELECT HIST-FILE ASSIGN TO UT-S-TU25 C98970
02150 RESERVE 1 ALTERNATE AREA. C98970
02200 SELECT IN-FILE-ISC ASSIGN TO DA-S-DT01 C98970
02210 RESERVE 1 ALTERNATE AREA. C98970
10000 DATA DIVISION. C98970
10010 FILE SECTION. C98970
11000 FD IN-FILE C98970
11120 RECURRING MODE IS F C98970
11130 BLOCK CONTAINS 90 RECORDS C98970
11140 RECORD CONTAINS 20 CHARACTERS C98970
11150 LABEL RECORDS ARE OMITTED C98970
11160 DATA RECORDS ARE IN-REC. C98970
11170 01 IN-REC SYC. C98970
11180 02 WUC PICTURE X(5). C98970
11182 02 FILLER PICTURE X(4). C98970
11183 02 OBS PICTURE S9(6). C98970
11184 02 OBS-1 REDEFINES OBS PICTURE S99999V9. C98970
11185 02 FILLER PICTURE X. C98970
11186 02 ISCHRONAL=NEW PICTURE X. C98970
11187 02 FILLER PICTURE X. C98970
11188 02 DATA-TYPE=NEW PICTURE X. C98970

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11189		02 FILLER	PICTURE X.	C98970
11300	FD	IN-FILL-ISC		C98970
11320		RECORDING MODE IS F		C98970
11330		BLOCK CONTAINS 20 RECORDS		C98970
11340		RECORD CONTAINS 80	CHARACTERS	C98970
11350		LABEL RECORDS ARE STANDARD		C98970
11360		DATA RECORDS ARE IN-REC-ISC.		C98970
11400	01	IN-REC-ISC SYNC.		C98970
11410		02 FILLER	PICTURE X(80).	C98970
12100	FD	HIST-FILE		C98970
12120		RECORDING MODE IS F		C98970
12130		BLOCK CONTAINS 15 RECORDS		C98970
12140		RECORD CONTAINS 130	CHARACTERS	C98970
12150		LABEL RECORDS ARE OMITTED		C98970
12160		DATA RECORDS ARE HIST-REC.		C98970
12170	01	HIST-REC SYNC.		C98970
12180		02 FILLER	PICTURE X(130).	C98970
30000		WORKING-STORAGE SECTION.		C98970
30010	77	KNT SYNC PICTURE S9(5).		C98970
30012	77	OBS-ISO SYNC PICTURE S9(5)V99999.		C98970
30014	77	OBS-NI SYNC PICTURE S9(5)V99999.		C98970
30020	01	FILLER SYNC.		C98970
30030		02 FREQ-HIST-VALUE OCCURS 2000 TIMES PICTURE S9(5)		C98970
30040		COMPUTATIONAL.		C98970
30050	01	A PICTURE S9(5) COMPUTATIONAL.		C98970
30060	01	NO-OF-HIST SYNC	PICTURE 99999 VALUE ZERO.	C98970
300A0	01	ONE SYNC	PICTURE X VALUE :1.	C98970
300B1	01	TWO SYNC	PICTURE X VALUE :2.	C98970
300B2	01	THREE SYNC	PICTURE X VALUE :3.	C98970
300B3	01	FOUR SYNC	PICTURE X VALUE :4.	C98970
300B4	01	FIVE SYNC	PICTURE X VALUE :5.	C98970
30090	01	CNT SYNC	PICTURE S9(5) COMPUTATIONAL.	C98970
30100	01	CUR-WUC-T SYNC.		C98970
30110		02 FILLER	PICTURE X(5) VALUE I WUC>1.	C98970
30120		02 CUR-WUC	PICTURE X(5).	C98970
30170	01	ISCHRONAL SYNC	PICTURE X.	C98970
30180	01	DATA-TYPE SYNC	PICTURE X.	C98970
30190	01	MINUS-ONE COMPUTATIONAL	PICTURE S999 VALUE -1 SYNC.	C98970
32000	01	REPORT-ID SYNC.		C98970
32010		02 FILLER	PICTURE X(50) VALUE	C98970
32020		:S9897860 TF7919-01 142-8 1 1/2	?	C98970
32030		02 FILLER	PICTURE X(50) VALUE SPACE.	C98970
32040		02 FILLER	PICTURE X(30) VALUE	C98970
32050		:	:1.	C98970
46000	01	MEAN COMPUTATIONAL SYNC	PICTURE S9(7)V99.	C98970
46010	01	VARIANCE COMPUTATIONAL SYNC	PICTURE S9(7)V99.	C98970
46020	01	TEMP-COMP	PICTURE S9(7)V99.	C98970
46100	01	MEAN-VARIANCE-LINE SYNC.		C98970
46110		02 FILLER	PICTURE X(50) VALUE	C98970
46120		:	1.	C98970
46130		02 FILLER	PICTURE X(19) VALUE	C98970
46140		:	MEAN >:.	C98970
46150		02 MEAN-RPT	PICTURE ZZZ9.9.	C98970
46160		02 FILLER	PICTURE X(30) VALUE	C98970
46170		:	VARIANCE >1.	C98970
46180		02 VARIANCE-RPT	PICTURE ZZZZZZ9.9.	C98970
46190		02 FILLER	PICTURE X(16) VALUE	C98970
46200		:	:1.	C98970
46300	01	MEAN-U COMPUTATIONAL SYNC	PICTURE S9(5)V99999 VALUE ZERO.	C98970
46310	01	VARIANCE-B COMPUTATIONAL SYNC	PICTURE S9(5)V99999	C98970
46315		VALUE ZERO.		C98970
46320	01	TEMP-COMP-I	SYNC PICTURE S9(5)V99999	C98970
46325		VALUE ZERO.		C98970
46330	01	HIST-NO-OF-OBS-B	SYNC PICTURE S9(5)V99999	C98970
46335		VALUE ZERO.		C98970
46400	01	MEAN-VARIANCE-LINE-B SYNC.		C98970
46410		02 FILLER	PICTURE X(50) VALUE	C98970
46420		:	1.	C98970
46430		02 FILLER	PICTURE X(16) VALUE	C98970
46440		:	MEAN>:.	C98970
46450		02 MEAN-RPT-B	PICTURE ZZZ9.99999.	C98970
46460		02 FILLER	PICTURE X(28) VALUE	C98970
46470		:	VARIANCE >:.	C98970
46480		02 VARIANCE-RPT-B	PICTURE ZZZZ9.99999.	C98970
46490		02 FILLER	PICTURE X(16) VALUE	C98970
46500		:	:1.	C98970
47000	01	HIST-VALUE-MAX SYNC	PICTURE S9999V99 VALUE -9999.9.	C98970
47010	01	HIST-VALUE-MIN SYNC	PICTURE S9999V99 VALUE <9999.9.	C98970
47015	01	HIST-VALUE-MI SYNC	PICTURE S9999V99 VALUE <9999.9.	C98970
47020	01	HIST-NO-OF-URS SYNC	PICTURE S9(5) VALUE ZERO.	C98970
47030	01	HIST-NO-OF-INTERVALS SYNC	PICTURE 999V99 VALUE 50.	C98970
47040	01	HIST-INPUT-VMAX-VMIN SYNC	PICTURE 9 VALUE ZERO.	C98970
47050	01	HIST-DIST SYNC	PICTURE X VALUE :11.	C98970
47060	01	HIST-INDEX SYNC COMPUTATIONAL		C98970
47070			PICTURE S999 VALUE ZERO.	C98970
47080	01	HIST-INDEX-2 SYNC COMPUTATIONAL		C98970
47090			PICTURE S999 VALUE ZERO.	C98970

47100	01	HIST-TEMP SYNC	PICTURE S99999V99 VALUE ZERO.	C98970
47110	01	HIST-INTERVAL-SIZE SYNC	PICTURE S999V99 VALUE ZERO	C98970
47120		COMPUTATIONAL.		C98970
47150	01	HIST-FLAG SYNC	PICTURE X VALUE :0:.	C98970
47160	01	HIST-SCALE-VALUE SYNC	COMPUTATIONAL	C98970
47170			PICTURE S999 VALUE <1.	C98970
47180	01	HIST-PERCENT SYNC	PICTURE S999V99 COMPUTATIONAL.	C98970
47190	01	HIST-CUM SYNC	PICTURE S999V99 COMPUTATIONAL.	C98970
47200	01	HIST-LINE SYNC	COMPUTATIONAL	C98970
47210			PICTURE S999 VALUE ZERO.	C98970
47220	01	HIST-PAGE-FLAG SYNC	PICTURE S999 VALUE <75.	C98970
47230	01	HIST-LINE-CAT SYNC	PICTURE S999.	C98970
47300	01	HIST-LINK-1 SYNC	PICTURE X(10) VALUE	C98970
47310			ERROR NO 01.	C98970
47320	01	HIST-LINK-3 SYNC.		C98970
47330	02	FILLER	PICTURE X(5) VALUE :BS > 1.	C98970
47340	02	HIST-ERR-2	PICTURE S9(5) VALUE ZERO.	C98970
47350	01	HIST-ERR-4 SYNC	PICTURE X(10) VALUE	C98970
47360			ERROR MAX:.	C98970
47370	01	HIST-ERR-5 SYNC	PICTURE X(10) VALUE	C98970
47380			MIN BAD. :.	C98970
47390	01	HIST-OUT-RANGE-VALUE SYNC	PICTURE S999 COMPUTATIONAL.	C98970
47500	01	FILLER SYNC.		C98970
47510	02	FILLER OCCURS 200 TIMES.		C98970
47530	03	HIST-TABLE	PICTURE S9(5) COMPUTATIONAL.	C98970
47540	03	HIST-UPPER-LIMIT	PICTURE S999V99 COMPUTATIONAL.	C98970
47550	03	HIST-TABLE-SCALED	PICTURE S999V99 COMPUTATIONAL.	C98970
47560	01	HIST-NEW-PAGE SYNC.		C98970
47570	02	FILLER	PICTURE X VALUE :1:.	C98970
47580	02	FILLER	PICTURE X(12) VALUE SPACE.	C98970
47582	02	FILLER	PICTURE X(5) VALUE :PAGE 1.	C98970
47584	02	HIST-PAGE-NO	PICTURE 9.	C98970
47590	02	FILLER	PICTURE X VALUE :2:.	C98970
47600	01	HIST-TITLE SYNC.		C98970
47610	02	FILLER	PICTURE X(3) VALUE :S 1.	C98970
47620	02	HIST-TITLE-1.		C98970
47621	03	FILLER	PICTURE X(10) VALUE SPACE.	C98970
47630	02	HIST-TITLE-2.		C98970
47631	03	FILLER	PICTURE X(10) VALUE SPACE.	C98970
47640	02	HIST-TITLE-3	PICTURE X(10) VALUE SPACE.	C98970
47650	02	HIST-TITLE-4	PICTURE X(10) VALUE SPACE.	C98970
47660	02	FILLER	PICTURE X(24) VALUE	C98970
47670		: NO OF OBSERVATIONS >:.		C98970
47680	02	HIST-NO-OF-OBS-RPT	PICTURE ZZZZ9.	C98970
47690	02	FILLER	PICTURE X(13) VALUE	C98970
47700		: VALUE MAX > :.		C98970
47710	02	HIST-VALUE-MAX-RPT	PICTURE ----.9.	C98970
47720	02	FILLER	PICTURE X(13) VALUE	C98970
47730		: VALUE MIN > :.		C98970
47740	02	HIST-VALUE-MIN-RPT	PICTURE ----.9.	C98970
47750	02	FILLER	PICTURE X(10) VALUE	C98970
47760		:.		C98970
47900	01	HIST-OUT-LINK SYNC.		C98970
47910	02	FILLER	PICTURE X(50) VALUE	C98970
47920		:/-----		C98970
47922	02	FILLER	PICTURE X(80) VALUE	C98970
47930		:/-----		C98970
47940		:/-----:.		C98970
47950	01	HIST-LABEL SYNC.		C98970
47960	02	FILLER	PICTURE X(50) VALUE	C98970
47970		:/ MIDPNT PCNT	CUM FREQ 1...5...10...15...20...25...30...35...40...45...50...55...60...65...70...75...80...85...90...95...100:.	C98970
47974	02	FILLER	PICTURE X(80) VALUE	C98970
47980	-	:25...30...35...40...45...50...55...60...65...70...75...80...		C98970
47990	-	:85...90...95...100:.		C98970
48000	01	HIST-LINE-OUT SYNC.		C98970
48010	02	FILLER	PICTURE X VALUE :/:.	C98970
48020	02	HIST-LINE-RPT	PICTURE ZZ9.	C98970
48030	02	FILLER	PICTURE X VALUE SPACE.	C98970
48040	02	HIST-MID POINT-RPT	PICTURE ----.9.	C98970
48060	02	HIST-PERCENT-RPT	PICTURE ZZ9.9.	C98970
48070	02	FILLER	PICTURE X VALUE SPACE.	C98970
48080	02	HIST-CUM RPT	PICTURE ZZ9.9.	C98970
48100	02	HIST-FREQ-RPT	PICTURE ZZZZ9.	C98970
48110	02	FILLER	PICTURE X VALUE SPACE.	C98970
48120	02	HIST-POINT OCCURS 100 TIMES		C98970
48130			PICTURE X.	C98970
48140	02	FILLER	PICTURE X VALUE :/:.	C98970
48150	01	HIST-OUT-RANGE-REC SYNC.		C98970
48160	02	FILLER	PICTURE X(35) VALUE	C98970
48170		:/ NUMBER OF OUT OF RANGE VALUES >1.		C98970
48180	02	HIST-OUT-RANGE-RPT	PICTURE ZZ9.	C98970
48190	02	FILLER	PICTURE X(91) VALUE SPACE.	C98970
48191	02	FILLER	PICTURE X VALUE :/:.	C98970
48200	01	HIST-SCALE-LINE SYNC.		C98970
48210	02	FILLER	PICTURE X(27) VALUE	C98970
48220		:/ SCALING FACTOR > 1.		C98970
48230	02	HIST-SCALE-RPT	PICTURE ZZ9.	C98970

48240	02	FILLER	PICTURE X(099) VALUE SPACE.	C98970
48250	02	FILLER	PICTURE X VALUE 1:1.	C98970
48300	01	FILLER SYNC.		C98970
48310	02	HIST-VALUE OCCURS 2000 TIMES		C98970
48320			PICTURE S9999V9 COMPUTATIONAL.	C98970
48350	01	NORS-AC-WK SYNC.		C98970
48360	05	NO-AC-WK-ISO	PICTURE S9(5).	C98970
48370	05	NO-AC-WK-N1	PICTURE S9(5).	C98970
48380	05	CUTOFF-ISO	PICTURE S9(2).	C98970
48390	05	CUTOFF-N1	PICTURE S9(2).	C98970
48395	05	FILLER	PICTURE X(66).	C98970
50000		PROCEDURE DIVISION.		C98970
50010		OPEN INPUT IN-FILE, IN-FILE-ISC.		C98970
50020		OPEN OUTPUT HIST-FILE.		C98970
50022		READ IN-FILE-ISC INTO NORS-AC-WK AT END GO TO CLOSE-FILES.		C98970
50023		MOVE NO-AC-WK-ISO TO OBS-ISO.		C98970
50024		MOVE NO-AC-WK-N1 TO OBS-N1.		C98970
50030		MOVE 2000 TO KNT.		C98970
50040		PERFORM RESET-TABLE THRU END-RST-TABLE.		C98970
50050		READ IN-FILE, AT END GO TO CLOSE-FILES.		C98970
50060		WRITE HIST-H1 C FROM REPORT-ID.		C98970
50100		PARA-1.		C98970
50110		MOVE 1 TO HIST-NO-OF-OBS.		C98970
50120		MOVE WUC TO CUR-WUC.		C98970
50140		MOVE UATA-TYPE-NEW TO DATA-TYPE.		C98970
50150		MOVE ISCHRONAL-NEW TO ISCHRONAL.		C98970
50160		IF DATA-TYPE IS EQUAL TO FIVE GO TO WEEKS-DATA ELSE GO TO		C98970
50170		FLT-DATA.		C98970
50200		READ1.		C98970
50210		READ IN-FILE AT END GO TO CLOSE-FILES.		C98970
50220		IF UATA-TYPE-NEW IS EQUAL TO 19: GO TO CLOSE-FILES.		C98970
50230		IF WUC IS NOT EQUAL TO CUR-WUC GO TO PARA-2.		C98970
50250		ADD 1 TO HIST-NO-OF-OBS.		C98970
50260		IF UATA-TYPE IS EQUAL TO FIVE GO TO WEEKS-DATA ELSE GO TO		C98970
50270		FLT-DATA.		C98970
50300		PARA-2.		C98970
50310		PERFORM SET-HISTOG THRU END-SH.		C98970
50320		PERFORM RESET-TABLE THRU END-RST-TABLE.		C98970
50330		GO TO PARA-1.		C98970
50400		RESET-TABLE.		C98970
50410		MOVE ZERO TO CNT.		C98970
50420		RST.		C98970
50430		ADD 1 TO CNT.		C98970
50440		MOVE MINUS-ONE TO HIST-VALUE [CNT].		C98970
50445		MOVE ZERO TO FREQ-HIST-VALUE [CNT].		C98970
50450		IF CNT IS LESS THAN KNT GO TO RST.		C98970
50455		MOVE ZERO TO KNT.		C98970
50460		END-RST-TABLE. EXIT.		C98970
50510		SET-HISTOG.		C98970
50515		IF HIST-NO-OF-OBS IS NOT GREATER THAN CUTOFF-N1 AND ISCHRONAL		C98970
50516		NOT EQUAL TO ONE GO TO END-SH.		C98970
50517		IF HIST-NO-OF-OBS IS NOT GREATER THAN CUTOFF-ISO AND		C98970
50518		ISCHRONAL IS EQUAL TO ONE GO TO END-SH.		C98970
50520		IF ISCHRONAL IS EQUAL TO ONE MOVE : ISO : 1 TO		C98970
50530		HIST-TITLE-4. ELSE MOVE : NON-ISO : TO HIST-TITLE-4.		C98970
50540		IF DATA-TYPE EQUAL TO ONE MOVE : NORM-HR : TO HIST-TITLE-3.		C98970
50541		IF DATA-TYPE EQUAL TO TWO MOVE : MAN-HR : TO HIST-TITLE-3.		C98970
50542		IF DATA-TYPE EQUAL TO THREE MOVE : NORM/MA :		C98970
50544		TO HIST-TITLE-3.		C98970
50545		IF DATA-TYPE EQUAL TO FOUR MOVE : NORS :		C98970
50546		TO HIST-TITLE-3.		C98970
50560		MOVE CUR-WUC-T TO HIST-TITLE-1.		C98970
50540		PERFORM WRITE-HISTOGRAM THRU END-HIST.		C98970
50600		IF HIST-FLAG IS EQUAL TO 1: THEN GO TO CF1.		C98970
50610		ADD 1 TO NO-OF-HISTS.		C98970
50620		END-SH. EXIT.		C98970
51000		WEEKS-DATA.		C98970
51010		MOVE ZERO TO CNT.		C98970
51020		WEEK-A.		C98970
51030		ADD 1 TO CNT.		C98970
51040		IF OBS IS EQUAL TO HIST-VALUE [CNT] GO TO WEEK-C.		C98970
51050		IF FREQ-HIST-VALUE [CNT] IS EQUAL TO ZERO GO TO WEEK-B.		C98970
51060		IF CNT IS LESS THAN 2000 GO TO WEEK-A.		C98970
51070		DISPLAY : MORE THAN 2000 FREQUENCY OCCURENCES 1 UPON CONSOLE.		C98970
51080		GO TO CF1.		C98970
51090		WEEK-B.		C98970
51100		MOVE OBS TO HIST-VALUE [CNT].		C98970
51110		IF CNT IS GREATER THAN KNT THEN MOVE CNT TO KNT.		C98970
51120		WEEK-C.		C98970
51130		ADD 1 TO FREQ-HIST-VALUE [CNT].		C98970
51140		GO TO READ1.		C98970
52000		FLT-DATA.		C98970
52010		MOVE ZERO TO CNT.		C98970
52020		FLT-A.		C98970
52030		ADD 1 TO CNT.		C98970

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52040 IF UPB-1 IS EQUAL TO HIST-VALUE [CNT] GO TO FLT-C. C98970
52050 IF FREQ-HIST-VALUE [CNT] IS EQUAL TO ZERO GO TO FLT-B. C98970
52060 IF CNT IS LESS THAN 2000 GO TO FLT-A. C98970
52070 DISPLAY : MORE THAN 2000 FREQUENCY OCCURENCES 1 UPON CONSOLE. C98970
52080 GO TO CFI. C98970
52090 FLT-B. C98970
52100 MOVE UPB-1 TO HIST-VALUE [CNT]. C98970
52110 IF CNT IS GREATER THAN KNT THEN MOVE CNT TO KNT. C98970
52120 FLT-C. C98970
52130 ADD 1 TO FREQ-HIST-VALUE [CNT]. C98970
52140 GO TO HEAD1. C98970
52200 CLOSE-FILLS. C98970
52205 PERFORM SET-HISTOG THRU END-SH. C98970
52207 CFI. C98970
52210 CLOSE IN-FILE HIST-FILE, IN-FILE-ISC. C98970
52211 IF HIST-FLAG IS EQUAL TO :1: DISPLAY : HIST ERROR 1 UPON C98970
52212 CONSOLE. C98970
52215 DISPLAY : NO F HISTOGRAMS > 1 NO-OF-HISTS UPON CONSOLE. C98970
52220 DISPLAY : END C9897 : UPON CONSOLE. C98970
52230 GOBACK. C98970
94000 COMPUTE-M-V. C98970
94010 IF ISCHRONAL EQUAL TO ONE MOVE OBS-ISO TO HIST-NO-OF-OBS-B C98970
94020 ELSE MOVE OBS-NI TO HIST-NO-OF-OBS-B. C98970
94030 MOVE ZERO TO CNT. C98970
94040 MOVE ZERO TO MEAN-B. C98970
94050 CMV-1-B. C98970
94060 ADD 1 TO CNT. C98970
94070 COMPUTE TEMP-COMP-B > HIST-VALUE [CNT] * C98970
94080 FREQ-HIST-VALUE [CNT]. C98970
94090 ADD TEMP-COMP-B TO MEAN-B. C98970
94100 IF CNT IS LESS THAN KNT GO TO CMV-1-B. C98970
94110 DIVIDE HIST-NO-OF-OBS-B INTO MEAN-B. C98970
94120 MOVE ZERO TO CNT. C98970
94130 MOVE ZERO TO VARIANCE-B. C98970
94140 CMV-2-B. C98970
94150 ADD 1 TO CNT. C98970
94160 COMPUTE TEMP-COMP-B > [(HIST-VALUE [CNT] - MEAN-B) ** 2] * C98970
94170 FREQ-HIST-VALUE [CNT]. C98970
94180 ADD TEMP-COMP-B TO VARIANCE-B. C98970
94190 IF CNT LESS THAN KNT GO TO CMV-2-B. C98970
94200 COMPUTE VARIANCE-B > VARIANCE-B / [HIST-NO-OF-OBS-B - 1]. C98970
94210 MOVE MEAN-B TO MEAN-RPT-B. C98970
94220 MOVE VARIANCE-B TO VARIANCE-RPT-B. C98970
94230 WRITE HIST-RPT FROM MEAN-VARIANCE-LINE-B. C98970
94240 END-CMV-B. EXIT. C98970
95000 COMPUTE-MEAN-VARIANCE. C98970
95005 IF HIST-NO-OF-OBS EQUAL TO 1 GO TO CMV-3. C98970
95010 MOVE ZERO TO CNT. C98970
95020 MOVE ZERO TO MEAN. C98970
95030 CMV-1. C98970
95040 ADD 1 TO CNT. C98970
95050 COMPUTE TEMP-COMP > HIST-VALUE [CNT] * FREQ-HIST-VALUE [CNT]. C98970
95060 ADD TEMP-COMP TO MEAN. C98970
95070 IF CNT IS LESS THAN KNT GO TO CMV-1. C98970
95080 DIVIDE HIST-NO-OF-OBS INTO MEAN. C98970
95090 MOVE ZERO TO CNT. C98970
95100 MOVE ZERO TO VARIANCE. C98970
95110 CMV-2. C98970
95120 ADD 1 TO CNT. C98970
95130 COMPUTE TEMP-COMP > [(HIST-VALUE [CNT] - MEAN) ** 2] * C98970
95140 FREQ-HIST-VALUE [CNT]. C98970
95150 ADD TEMP-COMP TO VARIANCE. C98970
95160 IF CNT IS LESS THAN KNT GO TO CMV-2. C98970
95170 COMPUTE VARIANCE > VARIANCE / [HIST-NO-OF-OBS - 1]. C98970
95180 MOVE MEAN TO MEAN-RPT. C98970
95190 MOVE VARIANCE TO VARIANCE-RPT. C98970
95191 GO TO CMV-4. C98970
95192 CMV-3. C98970
95193 MOVE ZERO TO VARIANCE-RPT. C98970
95194 MOVE HIST-VALUE [1] TO MEAN-RPT. C98970
95195 CMV-4. C98970
95200 WRITE HIST-RPT FROM MEAN-VARIANCE-LINE. C98970
95210 END-CMV. EXIT. C98970
95300 DLT-NO-OBS. C98970
95311 IF DATA-TYPE NOT EQUAL TO FOUR GO TO NOT-NORS. C98970
95312 IF ISCHRONAL EQUAL TO ONE MOVE OBS-ISO TO HIST-NO-OF-OBS-RPT C98970
95313 ELSE MOVE OBS-NI TO HIST-NO-OF-OBS-RPT. C98970
95314 GO TO BOTH-NORS. C98970
95315 NOT-NORS. C98970
95320 MOVE HIST-NO-OF-OBS TO HIST-NO-OF-OBS-RPT. C98970
95325 BOTH-NORS. C98970
95330 END-DLT-NO-OBS. EXIT. C98970
97000 WRITE-HISTOGRAM. C98970
97080 MOVE :0: TO HIST-FLAG. C98970
97090 MOVE ZERO TO HIST-OUT-RANGE-VALUE. C98970
97100 MOVE ZERO TO HIST-PAGE-NO. C98970
97140 MOVE -9999.9 TO HIST-VALUE-MAX. C98970

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97150      MOVL <9999.9 TO HIST-VALUE-MIN.          C98970
97200      MOVL ZERO TO HIST-INDEX.                  C98970
97210      HIST-FIND=VMAX-VMIN.                      C98970
97220      ADD 1 TO HIST-INDEX.                      C98970
97230      MOVL HIST-VALUE [HIST-INDEX] TO HIST-TEMP. C98970
97240      IF HIST-TEMP IS GREATER THAN HIST-VALUE-MAX THEN MOVE C98970
97250          HIST-TEMP TO HIST-VALUE-MAX.          C98970
97260      IF HIST-TEMP IS LESS THAN HIST-VALUE-MIN THEN MOVE C98970
97270          HIST-TEMP TO HIST-VALUE-MIN.          C98970
97280      IF HIST-INDEX IS LESS THAN KNT              THEN GO TO C98970
97281          HIST-FIND=VMAX-VMIN.                  C98970
97282      MOVL ZERO TO HIST-TEMP.                    C98970
97283      MOVL HIST-VALUE-MIN TO HIST-VALUE-MI.       C98970
97284      SET-LOW.                                     C98970
97285      IF HIST-VALUE-MI LESS THAN 100 GO TO GOT-LOW. C98970
97286      SUBTRACT 100 FROM HIST-VALUE-MI.           C98970
97287      ADD 100 TO HIST-TEMP.                      C98970
97288      GO TO SLT-LOW.                              C98970
97289      GOT-LOW.                                    C98970
97290      MOVL HIST-TEMP TO HIST-VALUE-MI.          C98970
97292      COMPUTE HIST-NO-OF-INTERVALS >             C98970
97294          [HIST-VALUE-MAX - HIST-VALUE-MI] / 4 < 4. C98970
97300      HIST-PRINT-TITLE.                          C98970
97301      IF HIST-NO-OF-INTERVALS IS LESS THAN 50 MOVE 50 TO C98970
97302          HIST-NO-OF-INTERVALS.                  C98970
97304      ADD 1 TO HIST-PAGE-NO.                     C98970
97306      MOVL 5 TO HIST-LINE-CNT.                   C98970
97310      WRITE HIST-REC FROM HIST-NEW-PAGE.          C98970
97311      PERFORM DET-NO-UBS THRU END-DET-NO-UBS.    C98970
97330      MOVL HIST-VALUE-MAX TO HIST-VALUE-MAX-RPT. C98970
97340      MOVL HIST-VALUE-MIN TO HIST-VALUE-MIN-RPT. C98970
97350      WRITE HIST-REC FROM HIST-TITLE.             C98970
97351      IF DATA-TYPE NOT EQUAL TO FOUR PERFORM COMPUTE-MEAN-VARIANCE C98970
97352          THRU END-CMV. ELSE PERFORM COMPUTE-M-V THRU END-CMV-B. C98970
97356      IF HIST-VALUE-MAX EQUAL TO ZERO GO TO END-HIST. C98970
97358      IF DATA-TYPE EQUAL TO FOUR GO TO END-HIST. C98970
97360      WRITE HIST-REC FROM HIST-DOT-LINE.           C98970
97370      WRITE HIST-REC FROM HIST-LABEL.             C98970
97380      WRITE HIST-REC FROM HIST-DOT-LINE.          C98970
97390      HIST-DUMMY.                                 C98970
97410      IF HIST-VALUE-MAX IS LESS THAN HIST-VALUE-MIN THEN GO TO C98970
97420          HIST-ERROR-2.                          C98970
97430      IF HIST-NO-OF-INTERVALS IS GREATER THAN 200 THEN MOVE 200 C98970
97440          TO HIST-NO-OF-INTERVALS.                C98970
97441      MOVL ZERO TO HIST-INDEX.                    C98970
97442      HIST-RST.                                    C98970
97443      ADD 1 TO HIST-INDEX.                         C98970
97444      MOVL ZERO TO HIST-TABLE [HIST-INDEX].       C98970
97445      IF HIST-INDEX IS LESS THAN HIST-NO-OF-INTERVALS C98970
97446          THEN GO TO HIST-RST.                    C98970
97450      MOVE 4.0 TO HIST-INTERVAL-SIZE.             C98970
97500      NOTL COMPUTE UPPER LIMIT FOR EACH INTERVAL. C98970
97510      MOVL ZERO TO HIST-INDEX.                   C98970
97520      MOVL HIST-VALUE-MI TO HIST-TEMP.            C98970
97530      HIST-INC-INTERVAL.                          C98970
97540      ADD 1 TO HIST-INDEX.                        C98970
97550      ADD HIST-INTERVAL-SIZE TO HIST-TEMP.         C98970
97560      MOVL HIST-TEMP TO HIST-UPPER-LIMIT [HIST-INDEX]. C98970
97570      IF HIST-INDEX IS LESS THAN HIST-NO-OF-INTERVALS THEN C98970
97580          GO TO HIST-INC-INTERVAL.                C98970
97600      NOTE PLACE OCCURANCE INTO APPROPRIATE CHANNEL. C98970
97610      MOVL ZERO TO HIST-INDEX-2.                 C98970
97620      HIST-OCCURANCE.                             C98970
97630      ADD 1 TO HIST-INDEX-2.                     C98970
97640      MOVL HIST-VALUE [HIST-INDEX-2] TO HIST-TEMP. C98970
97650      MOVL ZERO TO HIST-INDEX.                   C98970
97660      HIST-INTERVAL.                              C98970
97670      ADD 1 TO HIST-INDEX.                       C98970
97675      MOVL HIST-VALUE [HIST-INDEX-2] TO A.        C98970
97680      IF HIST-TEMP IS NOT GREATER THAN HIST-UPPER-LIMIT C98970
97690          [HIST-INDEX] THEN GO TO HIST-ADD-TABLE. C98970
97700      IF HIST-INDEX IS LESS THAN HIST-NO-OF-INTERVALS THEN GO TO C98970
97710          HIST-INTERVAL.                          C98970
97720      ADD A TO HIST-OUT-RANGE-VALUE.              C98970
97730      GO TO HIST-NO-AUD.                         C98970
97740      HIST-ADD-TABLE.                             C98970
97750      ADD A TO HIST-TABLE [HIST-INDEX].           C98970
97751      HIST-NO-AUD.                                C98970
97760      IF HIST-INDEX-2 IS LESS KNT                  GO TO HIST-OCCURANCE. C98970
97800      NOTE COMPUTE SCALE VALUE.                  C98970
97810      MOVL HIST-TABLE [1] TO HIST-TEMP.          C98970
97820      MOVL 1 TO HIST-INDEX.                     C98970
97830      HIST-SCALE.                                 C98970
97840      ADD 1 TO HIST-INDEX.                        C98970
97850      IF HIST-TABLE [HIST-INDEX] IS GREATER THAN HIST-TEMP THEN C98970
97860          MOVL HIST-TABLE [HIST-INDEX] TO HIST-TEMP. C98970
97870      IF HIST-INDEX IS LESS THAN HIST-NO-OF-INTERVALS THEN GO TO C98970

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97880                                HIST-SCALE.                                C98970
97890    COMPUTE HIST-SCALE-VALUE > (HIST-TEMP / 99) / 100.                C98970
97895    IF HIST-SCALE-VALUE LESS THAN 1 MOVE 1 TO HIST-SCALE-VALUE.        C98970
97900    MOVE ZERO TO HIST-INDEX.                                            C98970
97910    HIST-SCALED-VALUE..                                                C98970
97920    ADD 1 TO HIST-INDEX.                                                C98970
97930    COMPUTE HIST-TABLE-SCALED (HIST-INDEX) >                          C98970
97940        HIST-TABLE (HIST-INDEX) / HIST-SCALE-VALUE.                  C98970
97950    IF HIST-INDEX IS LESS THAN HIST-NO-OF-INTERVALS THEN GO TO        C98970
97960        HIST-SCALED-VALUES.                                            C98970
98000    NOTE PREPARE OUTPUT DATA.                                         C98970
98010    DIVIDE 2 INTO HIST-INTERVAL-SIZE.                                  C98970
98020    MOVE ZERO TO HIST-CUM.                                             C98970
98030    MOVE ZERO TO HIST-LINE.                                            C98970
98040    HIST-PREPARE.                                                       C98970
98050    ADD 1 TO HIST-LINE.                                                 C98970
98060    MOVE HIST-LINE TO HIST-LINE-RPT.                                    C98970
98070    COMPUTE HIST-TEMP > HIST-UPPER-LIMIT (HIST-LINE)                  C98970
98080        - HIST-INTERVAL-SIZE.                                          C98970
98090    MOVE HIST-TEMP TO HIST-MID-POINT-RPT.                              C98970
98100    COMPUTE HIST-PERCENT > HIST-TABLE (HIST-LINE) * 100               C98970
98110        / HIST-NO-OF-OBS.                                             C98970
98120    MOVE HIST-PERCENT TO HIST-PERCENT-RPT.                            C98970
98130    ADD HIST-PERCENT TO HIST-CUM.                                       C98970
98140    MOVE HIST-CUM TO HIST-CUM-RPT.                                      C98970
98150    MOVE HIST-TABLE (HIST-LINE) TO HIST-FREQ-RPT.                    C98970
98160    MOVE ZERO TO HIST-INDEX.                                           C98970
98170    IF HIST-DIST IS NOT EQUAL TO 10: GO TO HIST-CUM-1.                C98970
98180    COMPUTE HIST-INDEX-2 > HIST-TABLE-SCALED (HIST-LINE) < 0.5.        C98970
98190    IF HIST-INDEX-2 IS EQUAL TO ZERO GO TO HIST-PREP-SPACE.           C98970
98200    HIST-PREP-DIST.                                                     C98970
98210    ADD 1 TO HIST-INDEX.                                                C98970
98220    MOVE 1: TO HIST-POINT (HIST-INDEX).                               C98970
98230    IF HIST-INDEX IS LESS THAN HIST-INDEX-2 GO TO HIST-PREP-DIST.      C98970
98240    IF HIST-INDEX IS EQUAL TO 100 THEN GO TO HIST-WRITE.             C98970
98250    HIST-PPRP-SPACE.                                                    C98970
98260    ADD 1 TO HIST-INDEX.                                                C98970
98270    MOVE SPACE TO HIST-POINT (HIST-INDEX).                           C98970
98280    IF HIST-INDEX IS LESS THAN 100 THEN GO TO HIST-PREP-SPACE.        C98970
98290    GO TO HIST-WRITE.                                                  C98970
98300    HIST-CUM-1.                                                         C98970
98310    ADD 1 TO HIST-INDEX.                                                C98970
98320    MOVE SPACE TO HIST-POINT (HIST-INDEX).                            C98970
98330    IF HIST-INDEX IS LESS THAN 100 THEN GO TO HIST-CUM-1.              C98970
98335    COMPUTE HIST-INDEX > HIST-CUM < 0.5.                              C98970
98337    IF HIST-INDEX IS EQUAL TO ZERO GO TO HIST-WRITE.                  C98970
98340    MOVE 1: TO HIST-POINT (HIST-INDEX).                               C98970
98400    HIST-WRITE.                                                         C98970
98410    WRITE HIST-REC FROM HIST-LINE-OUT.                                 C98970
98412    ADD 1 TO HIST-LINE-CNT.                                             C98970
98414    IF HIST-PAGE-FLAG IS EQUAL TO ZERO GO TO HIST-NO-PAGING.          C98970
98415    IF HIST-LINE-CNT IS EQUAL TO HIST-PAGE-FLAG                       C98970
98416        THEN PERFORM HIST-PRINT-TITLE.                                C98970
98417    HIST-NO-PAGING.                                                      C98970
98420    IF HIST-LINE IS LESS THAN HIST-NO-OF-INTERVALS THEN GO TO        C98970
98430        HIST-PREPARE.                                                  C98970
98440    WRITE HIST-REC FROM HIST-DOT-LINE.                                   C98970
98450    MOVE HIST-SCALE-VALUE TO HIST-SCALE-RPT.                          C98970
98460    WRITE HIST-REC FROM HIST-SCALE-LINE.                                C98970
98470    IF HIST-OUT-RANGE-VALUE IS EQUAL TO ZERO GO TO HIST-WRITE-B.       C98970
98480    MOVE HIST-OUT-RANGE-VALUE TO HIST-OUT-RANGE-RPT.                  C98970
98490    WRITE HIST-REC FROM HIST-OUT-RANGE-REC.                            C98970
98500    HIST-WRITE-B.                                                       C98970
98510    WRITE HIST-REC FROM HIST-DOT-LINE.                                 C98970
98520    GO TO END-HIST.                                                    C98970
99000    HIST-LRROK-1.                                                       C98970
99010    WRITE HIST-REC FROM HIST-TITLE.                                    C98970
99020    MOVE HIST-ERR-1 TO HIST-TITLE-1.                                  C98970
99030    MOVE HIST-NO-OF-OBS TO HIST-FRR-2.                                C98970
99040    WRITE HIST-REC FROM HIST-TITLE.                                    C98970
99050    MOVE 1: TO HIST-FLAG.                                              C98970
99060    GO TO END-HIST.                                                    C98970
99100    HIST-ERRON-2.                                                       C98970
99110    MOVE HIST-ERR-4 TO HIST-TITLE-1.                                  C98970
99120    MOVE HIST-ERR-5 TO HIST-TITLE-2.                                  C98970
99130    WRITE HIST-REC FROM HIST-TITLE.                                    C98970
99140    MOVE 1: TO HIST-FLAG.                                              C98970
99150    GO TO END-HIST.                                                    C98970
99200    HIST-ERR-3.                                                         C98970
99210    MOVE 1: TO HIST-FLAG.                                              C98970
99290    END-HIST. EXIT.                                                    C98970
/*    PLACE COBOL SOURCE BEFORE                                          1440 CDS
//CHG,TFGIN    DU    *SPICE)(CYL,(1,1))
TFG DTU1    11    0202080
01020210220515
*END

```



```

/*      PLACE TFG DATA BEFORE THIS CARD
//TPR.TU12  DU  DISP>[OLD,KEEP],VOL>SER>+F1,UNIT>T+F1
//TPR.TU25  DU  DISP>[OLD,KEEP],VOL>SER>+F8,UNIT>T+F8
//TPR.TPRIN  DU  *,SPACE>[TRK,[1,1]]
T/P  DT01  1010080Z080
T/P  TU12  1010020Z020
T/P  TU25  1100130R000
/*      PLACE T/P CONTROL CARDS BEFORE THIS CARD

```

T12  
T25

#### 6.8.4 SORT FOR UNSCHEDULED MANHOURS

```

//T9897N JOB 01: G WANG : ,PKTY>02, TYPRUN>HOLD
//C9897F EXEC P9622N>W(60,TIME>04,ACCT>D35323007
//CHG.SORTIN DU  DISP>[KEEP],UNIT>[A+F5,2,DEFER],
//          DSN>E.9897429, CT22/23 1
//          VOL>SER>[A+F5,B+F5,C+F5,D+F5,E+F5,F+F5,G+F5,H+F5, CT22 2
//          I+F5,J+F5,K+F5,L+F5,M+F5,N+F5,O+F5,P+F5,Q+F5,R+F5,S+F5], CT22 3
//          DCH>[LRECL>0020,RLKSIZE>1800],LABEL>[NSL,RETPD>099] CT22 4
//CHG.SORTOUT DU  DISP>[KEEP],UNIT>[A+F1,2,DEFER],DSN>A.9897430, CT12/13 1
//          VOL>SER>[F1,A+F1,B+F1,C+F1,D+F1,E+F1,F+F1,G+F1,H+F1, CT12 2
//          I+F1,J+F1,K+F1,L+F1,M+F1,N+F1,O+F1,P+F1,Q+F1,R+F1,S+F1], CT12 3
//          DCH>[LRECL>0020,RLKSIZE>1800]
//CHG.SYSIN DU  *,DCL>BLKSIZE>0080,SPACE>[TRK,[1,1]]
SORT FIELDS>[017,001,CH>A,019,001,CH>A,001,005,CH>A,006,003,CH>A], C
SIZE>E0250000
MODS E15>[E15,008,SORTLIB,N],E18>[E18,024,SORTLIB,N]
/*

```

#### 6.8.5 CUMULATIVE DISTRIBUTION FOR UNSCHEDULED MANHOURS

```

//C9897N EXEC P9655L,TIME>16,ACCT>D35323007
//CHG.TU12  DU  DISP>[PASS],UNIT>[T+F1,1,DEFER],DSN>A.9897430, CT12 1
//          VOL>SER>[A+F1,A+F1,B+F1,C+F1,D+F1,E+F1,F+F1,G+F1,H+F1, CT12 2
//          I+F1,J+F1,K+F1,L+F1,M+F1,N+F1,O+F1,P+F1,Q+F1,R+F1,S+F1] T12
//CHG.TU25  DU  DISP>[PASS],UNIT>[T+F8,1,DEFER],DSN>H.9897431, CT25 1
//          VOL>SER>[A+F8,A+F8,B+F8,C+F8,D+F8,E+F8,F+F8,G+F8,H+F8, CT25 2
//          I+F8,J+F8,K+F8,L+F8,M+F8,N+F8,O+F8,P+F8,Q+F8,R+F8,S+F8] T25 3
//CHG.INPUT DU  *,SPACE>[CTL,[1,1]]
00000 COMBINE COMPILE G. WANG, 1440 CDS
01040 DATE-WRITTEN: 7 APR 72. C98970
01050 REMARKS. C98970
01060 TASK 2C HIST OF WUC<HMC. C98970
02000 ENVIRONMENT DIVISION. C98970
02010 CONFIGURATION SECTION. C98970
02020 SOURCE-COMPUTER. IBM-360. C98970
02030 OBJECT-COMPUTER. IBM-360. C98970
02100 INPUT-OUTPUT SECTION. C98970
02110 FILE-CONTROL. C98970
02120 SELECT IN-FILE ASSIGN TO UT-S-TU12 C98970
02130 RESERVE 1 ALTERNATE AREA. C98970
02140 SELECT HIST-FILE ASSIGN TO UT-S-TU25 C98970
02150 RESERVE 1 ALTERNATE AREA. C98970
02200 SELECT IN-FILE-ISC ASSIGN TO DA-S-DT01 C98970
02210 RESERVE 1 ALTERNATE AREA. C98970
10000 DATA DIVISION. C98970
10010 FILE SECTION. C98970
11100 FD IN-FILL C98970
11120 RECORDING MODE IS F C98970
11130 BLOCK CONTAINS 90 RECORDS C98970
11140 RECORD CONTAINS 20 CHARACTERS C98970
11150 LABEL RECORDS ARE OMITTED C98970
11160 DATA RECORDS ARE IN-REC. C98970
11170 01 IN-REC SYNC. C98970
11180 02 WUC PICTURE X(5). C98970
11181 02 HMC PICTURE X(3). C98970
11182 02 FILLER PICTURE X. C98970
11183 02 OBS PICTURE S9(6). C98970
11184 02 OBS-1 REDEFINES OBS PICTURE S99999V9. C98970
11185 02 FILLER PICTURE X. C98970
11186 02 ISCHRONAL-NEW PICTURE X. C98970
11187 02 FILLER PICTURE X. C98970
11188 02 DATA-TYPE-NEW PICTURE X. C98970
11189 02 FILLER PICTURE X. C98970
11300 FD IN-FILE-ISC C98970
11320 RECORDING MODE IS F C98970
11330 BLOCK CONTAINS 20 RECORDS C98970
11340 RECORD CONTAINS 80 CHARACTERS C98970
11350 LABEL RECORDS ARE STANDARD C98970
11360 DATA RECORDS ARE IN-REC-ISC. C98970
11400 01 IN-REC-ISC SYNC. C98970

```

11410		02 FILLER	PICTURE XC(80).	C98970
12100	FO	HIST-FILE		C98970
12120		RECURRING MODE IS F		C98970
12130		BLOCK CONTAINS 15 RECORDS		C98970
12140		RECORD CONTAINS 130	CHARACTERS	C98970
12150		LABEL RECORDS ARE OMITTED		C98970
12160		DATA RECORDS A E HIST-REC.		C98970
12170	01	HIST-REC SYNC.		C98970
12180		02 FILLER	PICTURE XC(130).	C98970
30000		WORKING-STORAGE SECTION.		C98970
30010	77	KNT SYNC PICTURE S9(5).		C98970
30020	01	FILLER SYNC.		C98970
30030		02 FILLER-HIST-VALUE OCCURS 1000 TIMES PICTURE S9(5)		C98970
30040		COMPUTATIONAL.		C98970
30050	01	A PICTURE S9(5) COMPUTATIONAL.		C98970
30060	01	NO-OF-HISTS SYNC	PICTURE 9999 VALUE ZERO.	C98970
30080	01	ONE SYNC	PICTURE X VALUE :1.	C98970
30082	01	TWO SYNC	PICTURE X VALUE :2.	C98970
30090	01	CNT SYNC	PICTURE S9(5) COMPUTATIONAL.	C98970
30100	01	CUR-WUC-T SYNC.		C98970
30110		02 FILLER	PICTURE XC(5) VALUE : WUC>I.	C98970
30120		02 CUR-WUC	PICTURE XC(5).	C98970
30130	01	CUR-HMC-T SYNC.		C98970
30140		02 FILLER	PICTURE XC(5) VALUE : HMC>I.	C98970
30150		02 CUR-HMC	PICTURE XC(3).	C98970
30160		02 FILLER	PICTURE XX VALUE SPACE.	C98970
30170	01	ISCHRONAL SYNC	PICTURE X.	C98970
30180	01	DATA-TYPE SYNC	PICTURE X.	C98970
30190	01	MINUS-ONE COMPUTATIONAL	PICTURE S999 VALUE -1 SYNC.	C98970
32000	01	HEPOT-10 SYNC.		C98970
32010		02 FILLER	PICTURE XC(50) VALUE	C98970
32020		159897860 IF7919-01 142-A 1 1/2	I.	C98970
32030		02 FILLER	PICTURE XC(50) VALUE SPACE.	C98970
32040		02 FILLER	PICTURE XC(30) VALUE	C98970
32050		:	2.	C98970
40000	01	MEAN COMPUTATIONAL SYNC	PICTURE S9(7)V99.	C98970
40010	01	VARIANCE COMPUTATIONAL SYNC	PICTURE S9(7)V99.	C98970
40020	01	TEMP-COMP	PICTURE S9(7)V99.	C98970
40100	01	MEAN-VARIANCE-LINE SYNC.		C98970
40110		02 FILLER	PICTURE XC(50) VALUE	C98970
40120		:	I.	C98970
40130		02 FILLER	PICTURE XC(19) VALUE	C98970
40140		:	MEAN >.	C98970
40150		02 MEAN-RPT	PICTURE ZZZ9.9.	C98970
40160		02 FILLER	PICTURE XC(30) VALUE	C98970
40170		:	VARIANCE >.	C98970
40180		02 VARIANCE-RPT	PICTURE ZZZZZZ9.9.	C98970
40190		02 FILLER	PICTURE XC(16) VALUE	C98970
40200		:	2.	C98970
47000	01	HIST-VALUE-MAX SYNC	PICTURE S9999V99 VALUE -9999.9.	C98970
47010	01	HIST-VALUE-MIN SYNC	PICTURE S9999V99 VALUE <9999.9.	C98970
47015	01	HIST-VALUE-M1 SYNC	PICTURE S9999V99 VALUE <9999.9.	C98970
47020	01	HIST-NO-OF-ORS SYNC	PICTURE S9(5) VALUE ZERO.	C98970
47030	01	HIST-NO-OF-INTERVALS SYNC	PICTURE 999V99 VALUE 50.	C98970
47040	01	HIST-INPUT-VMAX-VMIN SYNC	PICTURE 9 VALUE ZERO.	C98970
47050	01	HIST-UIST SYNC	PICTURE X VALUE :1.	C98970
47060	01	HIST-INDEX SYNC COMPUTATIONAL		C98970
47070			PICTURE S999 VALUE ZERO.	C98970
47080	01	HIST-INDEX-2 SYNC COMPUTATIONAL		C98970
47090			PICTURE S999 VALUE ZERO.	C98970
47100	01	HIST-TEMP SYNC	PICTURE S99999V99 VALUE ZERO.	C98970
47110	01	HIST-INTERVAL-SIZE SYNC	PICTURE S9999V99 VALUE ZERO	C98970
47120		COMPUTATIONAL.		C98970
47150	01	HIST-FLAG SYNC	PICTURE X VALUE 101.	C98970
47160	01	HIST-SCALE-VALUE SYNC COMPUTATIONAL		C98970
47170			PICTURE S999 VALUE <1.	C98970
47180	01	HIST-PERCENT SYNC	PICTURE S999V99 COMPUTATIONAL.	C98970
47190	01	HIST-CUM SYNC	PICTURE S999V99 COMPUTATIONAL.	C98970
47200	01	HIST-LINE SYNC COMPUTATIONAL		C98970
47210			PICTURE S999 VALUE ZERO.	C98970
47220	01	HIST-PAGE-FLAG SYNC	PICTURE S999 VALUE <75.	C98970
47230	01	HIST-LINE-CNT SYNC	PICTURE S999.	C98970
47300	01	HIST-ERR-1 SYNC	PICTURE XC(10) VALUE	C98970
47310		:ERROR NO 01.		C98970
47320	01	HIST-ERR-3 SYNC.		C98970
47330		02 FILLER	PICTURE XC(5) VALUE :RS > I.	C98970
47340		02 HIST-ERR-2	PICTURE S9(5) VALUE ZERO.	C98970
47350	01	HIST-ERR-4 SYNC	PICTURE XC(10) VALUE	C98970
47360		:ERROR MAX1.		C98970
47370	01	HIST-ERR-5 SYNC	PICTURE XC(10) VALUE	C98970
47380		:MIN BAD. 1.		C98970
47390	01	HIST-OUT-RANGE-VALUE SYNC	PICTURE S999 COMPUTATIONAL.	C98970
47500	01	FILLER SYNC.		C98970
47510		02 FILLER OCCURS 200 TIMES.		C98970
47530		03 HIST-TABLE	PICTURE S9(5) COMPUTATIONAL.	C98970
47540		03 HIST-UPPER-LIMIT	PICTURE S9999V99 COMPUTATIONAL.	C98970

47550	03 HIST-TABLE-SCALED	PICTURE S999V99 COMPUTATIONAL.	C98970
47560	01 HIST-NL*-PAGE SYNC.		C98970
47570	02 FILLER	PICTURE X VALUE I1:.	C98970
47580	02 FILLER	PICTURE X(122) VALUE SPACE.	C98970
47582	02 FILLER	PICTURE X(5) VALUE IPAGE:.	C98970
47584	02 HIST-PAGE-NO	PICTURE 9.	C98970
47590	02 FILLER	PICTURE X VALUE I2:.	C98970
47600	01 HIST-TITLE SYN.		C98970
47610	02 FILLER	PICTURE X(3) VALUE I5:.	C98970
47620	02 HIST-TITLE-1.		C98970
47621	03 FILLER	PICTURE X(10) VALUE SPACE.	C98970
47630	02 HIST-TITLE-2.		C98970
47631	03 FILLER	PICTURE X(10) VALUE SPACE.	C98970
47640	02 HIST-TITLE-3	PICTURE X(10) VALUE SPACE.	C98970
47650	02 HIST-TITLE-4	PICTURE X(10) VALUE SPACE.	C98970
47660	02 FILLER	PICTURE X(24) VALUE	C98970
47670	:	NO OF OBSERVATIONS >:.	C98970
47680	02 HIST-NO-OF-OBS-RPT	PICTURE ZZZZ9.	C98970
47690	02 FILLER	PICTURE X(13) VALUE	C98970
47700	:	VALUE MAX >:.	C98970
47710	02 HIST-VALUE-MAX-RPT	PICTURE ----.9.	C98970
47720	02 FILLER	PICTURE X(13) VALUE	C98970
47730	:	VALUE MIN >:.	C98970
47740	02 HIST-VALUE-MIN-RPT	PICTURE ----.9.	C98970
47750	02 FILLER	PICTURE X(18) VALUE	C98970
47760	:	I2:.	C98970
47900	01 HIST-OUT-LINE SYNC.		C98970
47910	02 FILLER	PICTURE X(50) VALUE	C98970
47920	:	-----1.	C98970
47922	02 FILLER	PICTURE X(80) VALUE	C98970
47930	:	-----	C98970
47940	:	I2:.	C98970
47950	01 HIST-LABEL SYNC.		C98970
47960	02 FILLER	PICTURE X(50) VALUE	C98970
47970	:	MIDPNT PCNT CUM FREQ 1...5...10...15...20...:	C98970
47974	02 FILLER	PICTURE X(80) VALUE	C98970
47980	-	I25...30...35...40...45...50...55...60...65...70...80...	C98970
47990	-	I85...90...95...100:.	C98970
48000	01 HIST-LINE-OUT SYNC.		C98970
48010	02 FILLER	PICTURE X VALUE I1:.	C98970
48020	02 HIST-LINE-PT	PICTURE Z29.	C98970
48030	02 FILLER	PICTURE X VALUE SPACE.	C98970
48040	02 HIST-MID-POINT-RPT	PICTURE ----.9.	C98970
48060	02 HIST-PERCENT-RPT	PICTURE Z29.9.	C98970
48070	02 FILLER	PICTURE X VALUE SPACE.	C98970
48080	02 HIST-CUM-RPT	PICTURE Z29.9.	C98970
48100	02 HIST-FREQ-RPT	PICTURE ZZZZ9.	C98970
48110	02 FILLER	PICTURE X VALUE SPACE.	C98970
48120	02 HIST-POINT OCCURS 100 TIMES		C98970
48130		PICTURE X.	C98970
48140	02 FILLER	PICTURE X VALUE I2:.	C98970
48150	01 HIST-OUT-RANGE-REC SYNC.		C98970
48160	02 FILLER	PICTURE X(35) VALUE	C98970
48170	:	NUMBER OF OUT OF RANGE VALUES >:.	C98970
48180	02 HIST-OUT-RANGE-RPT	PICTURE Z29.	C98970
48190	02 FILLER	PICTURE X(91) VALUE SPACE.	C98970
48191	02 FILLER	PICTURE X VALUE I2:.	C98970
48200	01 HIST-SCALE-LINE SYNC.		C98970
48210	02 FILLER	PICTURE X(27) VALUE	C98970
48220	:	SCALING FACTOR >:.	C98970
48230	02 HIST-SCALE-RPT	PICTURE Z29.	C98970
48240	02 FILLER	PICTURE X(99) VALUE SPACE.	C98970
48250	02 FILLER	PICTURE X VALUE I2:.	C98970
48300	01 FILLER SYNC.		C98970
48310	02 HIST-VALUE OCCURS 1000 TIMES		C98970
48320		PICTURE S999V99 COMPUTATIONAL.	C98970
48350	01 HIST-AC-WK SYC.		C98970
48360	05 CUTOFF-ISO	PICTURE S9(2).	C98970
48390	05 CUTOFF-NI	PICTURE S9(2).	C98970
48395	05 FILLER	PICTURE X(76).	C98970
50000	PROCEDURE DIVISION		C98970
50010	OPEN INPUT IN-FILE, IN-FILE-ISC.		C98970
50020	OPEN OUTPUT HIST-FILE.		C98970
50022	READ IN-FILE-ISC INTO HIST-AC-WK AT END GO TO CLOSE-FILES.		C98970
50030	MOVE 1000 TO NNT.		C98970
50040	PERFORM RESLT-TABLE THRU END-RST-TABLE.		C98970
50050	HEAD IN-FILE, AT END GO TO CLOSE-FILES.		C98970
50060	WRITE HIST-REC FROM REPORT-ID.		C98970
50100	PARA-1.		C98970
50110	MOVE 1 TO HIST-NO-OF-OBS.		C98970
50120	MOVE WUC TO CL1-WUC.		C98970
50130	MOVE HMC TO CL2-HMC.		C98970
50140	MOVE DATA-TYPE-NEW TO DATA-TYPE.		C98970
50150	MOVE ISCHRONAL-NEW TO ISCHRONAL.		C98970
50160	IF DATA-TYPE NOT EQUAL TO ONE GO TO WEEKS-DATA ELSE GO TO		C98970
50170	FLY-DATA.		C98970

50200	READ1.	C98970
50210	READ IN-FILE, AT END GO TO CLOSE-FILES.	C98970
50220	IF DATA-TYPL-NEW IS EQUAL TO :9: GO TO CLOSE-FILES.	C98970
50230	IF WUC IS NOT EQUAL TO CUR-WUC GO TO PARA-2.	C98970
50240	IF HMC IS NOT EQUAL TO CUR-HMC GO TO PARA-2.	C98970
50250	ADD 1 TO HIST-NO-OF-OBS.	C98970
50260	IF DATA-TYPL NOT EQUAL TO ONE GO TO WEEKS-DATA ELSE GO TO	C98970
50270	FLT-DATA.	C98970
50300	PARA-2.	C98970
50310	PERFORM SET-HISTOG THRU END-SH.	C98970
50320	PERFORM RESET-TABLE THRU END-RST-TABLE.	C98970
50330	GO TO PARA-1.	C98970
50400	RSET-TABLE.	C98970
50410	MOVE ZERO TO CNT.	C98970
50420	RST.	C98970
50430	ADD 1 TO CNT.	C98970
50440	MOVE MINUS-ONE TO HIST-VALUE [CNT].	C98970
50445	MOVE ZERO TO FREQ-HIST-VALUE [CNT].	C98970
50450	IF CNT IS LESS THAN KNT GO TO RST.	C98970
50455	MOVE ZERO TO KNT.	C98970
50460	END-RST-TABLE, LXIT.	C98970
50510	SET-HISTOG.	C98970
50515	IF HIST-NO-OF-OBS IS NOT GREATER THAN CUTOFF-NI AND ISCHRONAL	C98970
50516	NOT EQUAL TO ONE GO TO END-SH.	C98970
50517	IF HIST-NO-OF-OBS IS NOT GREATER THAN CUTOFF-ISO AND	C98970
50518	ISCHRONAL IS EQUAL TO ONE GO TO END-SH.	C98970
50520	IF ISCHRONAL IS EQUAL TO ONE MOVE I ISO : TO	C98970
50530	HIST-TITLE-4, ELSE MOVE : NON-ISO : TO HIST-TITLE-4.	C98970
50540	IF DATA-TYPE IS EQUAL TO ONE MOVE : MAN-HR/MA: TO	C98970
50550	HIST-TITLE-3, ELSE MOVE : FLT-HOURS: TO HIST-TITLE-3.	C98970
50560	MOVE CUR-WUC-1 TO HIST-TITLE-1.	C98970
50570	MOVE CUR-HMC-1 TO HIST-TITLE-2.	C98970
50580	PERFORM WRITE HISTOGRAM THRU END-HIST.	C98970
50600	IF HIST-FLAG 'S' EQUAL TO :I: THEN GO TO CFI.	C98970
50610	ADD 1 TO NO-OF-HISTS.	C98970
50620	END-SH, LXIT.	C98970
51000	WEEKS-DATA.	C98970
51010	MOVE ZERO TO CNT.	C98970
51020	WEEK-A.	C98970
51030	ADD 1 TO CNT.	C98970
51040	IF OBS IS EQUAL TO HIST-VALUE [CNT] GO TO WEEK-C.	C98970
51050	IF FREQ-HIST-VALUE [CNT] IS EQUAL TO ZERO GO TO WEEK-B.	C98970
51060	IF CNT IS LESS THAN 1000 GO TO WEEK-A.	C98970
51070	DISPLAY : MORE THAN 1000 FREQUENCY OCCURENCES : UPON CONSOLE.	C98970
51080	GO TO CFI.	C98970
51090	WEEK-B.	C98970
51100	MOVE OBS TO HIST-VALUE [CNT].	C98970
51110	IF CNT IS GREATER THAN KNT THEN MOVE CNT TO KNT.	C98970
51120	WEEK-C.	C98970
51130	ADD 1 TO FREQ-HIST-VALUE [CNT].	C98970
51140	GO TO READ1.	C98970
52000	FLT-DATA.	C98970
52010	MOVE ZERO TO CNT.	C98970
52020	FLT-A.	C98970
52030	ADD 1 TO CNT.	C98970
52040	IF OBS-1 IS EQUAL TO HIST-VALUE [CNT] GO TO FLT-C.	C98970
52050	IF FREQ-HIST-VALUE [CNT] IS EQUAL TO ZERO GO TO FLT-B.	C98970
52060	IF CNT IS LESS THAN 1000 GO TO FLT-A.	C98970
52070	DISPLAY : MORE THAN 1000 FREQUENCY OCCURENCES : UPON CONSOLE.	C98970
52080	GO TO CFI.	C98970
52090	FLT-B.	C98970
52100	MOVE OBS-1 TO HIST-VALUE [CNT].	C98970
52110	IF CNT IS GREATER THAN KNT THEN MOVE CNT TO KNT.	C98970
52120	FLT-C.	C98970
52130	ADD 1 TO FREQ-HIST-VALUE [CNT].	C98970
52140	GO TO READ1.	C98970
52200	CLOSE-FILES.	C98970
52205	PERFORM SET-HISTOG THRU END-SH.	C98970
52207	CFI.	C98970
52210	CLOSE IN-FILE, HIST-FILE, IN-FILE-ISC.	C98970
52211	IF HIST-FLAG IS EQUAL TO :II DISPLAY 1 HIST ERROR 1 UPON	C98970
52212	CONSOLE.	C98970
52215	DISPLAY : NO CF HISTOGRAMS > 1 NO-OF-HISTS UPON CONSOLE.	C98970
52220	DISPLAY : E0J C9897P : UPON CONSOLE.	C98970
52230	GOBACK.	C98970
95000	COMPUTE-MEAN-VARIANCE.	C98970
95005	IF HIST-NO-OF-OBS EQUAL TO 1 GO TO CMV-3.	C98970
95010	MOVE ZERO TO CNT.	C98970
95020	MOVE ZERO TO MEAN.	C98970
95030	CMV-1.	C98970
95040	ADD 1 TO CNT.	C98970
95050	COMPUTE TEMP-COMP > HIST-VALUE [CNT] * FREQ-HIST-VALUE [CNT].	C98970
95060	ADD TEMP-COMP TO MEAN.	C98970
95070	IF CNT IS LESS THAN KNT GO TO CMV-1.	C98970
95080	DIVIDE HIST-NO-OF-OBS INTO MEAN.	C98970
95090	MOVE ZERO TO CNT.	C98970
95100	MOVE ZERO TO VARIANCE.	C98970

95110	CMV-2.	C98970
95120	ADD 1 TO CNT.	C98970
95130	COMPUTE TEMP-COMP > [(HIST-VALUE [CNT] - MEAN) ** 2] *	C98970
95140	FREQ-HIST-VALUE [CNT].	C98970
95150	ADD TEMP-COMP TO VARIANCE.	C98970
95160	IF CNT IS LESS THAN KNT GO TO CMV-2.	C98970
95170	COMPUTE VARIANCE > VARIANCE / [HIST-NO-OF-OBS - 1].	C98970
95180	MOVL MEAN TO MEAN-RPT.	C98970
95190	MOVE VARIANCE TO VARIANCE-RPT.	C98970
95191	GO TO CMV-4.	C98970
95192	CMV-3.	C98970
95193	MOVL ZERO TO VARIANCE-RPT.	C98970
95194	MOVE HIST-VALUE [1] TO MEAN-RPT.	C98970
95195	CMV-4.	C98970
95200	WRITE HIST-REC FROM MEAN-VARIANCE-LINE.	C98970
95290	END-CMV.	C98970
97000	WRITE-HISTOGRAM.	C98970
97080	MOVE 10: TO HIST-FLAG.	C98970
97090	MOVE ZERO TO HIST-OUT-RANGE-VALUE.	C98970
97100	MOVE ZERO TO HIST-PAGE-NO.	C98970
97140	MOVE -9999.9 TO HIST-VALUE-MAX.	C98970
97150	MOVE -9999.9 TO HIST-VALUE-MIN.	C98970
97200	MOVL ZERO TO HIST-INDEX.	C98970
97210	HIST-FIND-VMAX-VMIN.	C98970
97220	ADD 1 TO HIST-INDEX.	C98970
97230	MOVE HIST-VALUE [HIST-INDEX] TO HIST-TEMP.	C98970
97240	IF HIST-TMP IS GREATER THAN HIST-VALUE-MAX THEN MOVE	C98970
97250	HIST-TEMP TO HIST-VALUE-MAX.	C98970
97260	IF HIST-TMP IS LESS THAN HIST-VALUE-MIN THEN MOVE	C98970
97270	HIST-TEMP TO HIST-VALUE-MIN.	C98970
97280	IF HIST-INDEX IS LESS THAN KNT THEN GO TO	C98970
97281	HIST-FIND-VMAX-VMIN.	C98970
97282	MOVL ZERO TO HIST-VALUE-MI.	C98970
97283	MOVE HIST-VALUE-MIN TO HIST-TEMP.	C98970
97284	SET-LOW.	C98970
97285	IF HIST-TMP LESS THAN 100 GO TO GOT-LOW.	C98970
97286	SUBTRACT 100 FROM HIST-TEMP.	C98970
97287	ADD 100 TO HIST-VALUE-MI.	C98970
97288	GO TO SET-LOW.	C98970
97289	GOT-LOW.	C98970
97292	COMPUTE HIST-NO-OF-INTERVALS >	C98970
97294	[HIST-VALUE-MAX - HIST-VALUE-MI] / 1.0 < 4.	C98970
97300	HIST-PRINT-TITLE.	C98970
97301	IF HIST-NO-OF-INTERVALS IS LESS THAN 50 MOVE 50 TO	C98970
97302	HIST-NO-OF-INTERVALS.	C98970
97304	ADD 1 TO HIST-PAGE-NO.	C98970
97306	MOVL 5 TO HIST-LINE-CNT.	C98970
97310	WRITE HIST-REC FROM HIST-NEW-PAGE.	C98970
97320	MOVE HIST-NO-OF-OBS TO HIST-NO-OF-OBS-RPT.	C98970
97330	MOVL HIST-VALUE-MAX TO HIST-VALUE-MAX-RPT.	C98970
97340	MOVE HIST-VALUE-MIN TO HIST-VALUE-MIN-RPT.	C98970
97350	WRITE HIST-REC FROM HIST-TITLE.	C98970
97355	PERFORM COMPUTE-MEAN-VARIANCE THRU END-CMV.	C98970
97356	IF HIST-VALUE-MAX EQUAL TO ZERO GO TO END-HIST.	C98970
97360	WRITE HIST-REC FROM HIST-DOT-LINE.	C98970
97370	WRITE HIST-REC FROM HIST-LABEL.	C98970
97380	WRITE HIST-REC FROM HIST-DOT-LINE.	C98970
97390	HIST-EMPTY.	C98970
97410	IF HIST-VALUE-MAX IS LESS THAN HIST-VALUE-MIN THEN GO TO	C98970
97420	HIST-ERROR-2.	C98970
97430	IF HIST-NO-OF-INTERVALS IS GREATER THAN 200 THEN MOVE 200	C98970
97440	TO HIST-NO-OF-INTERVALS.	C98970
97441	MOVE ZERO TO HIST-INDEX.	C98970
97442	HIST-RST.	C98970
97443	ADD 1 TO HIST-INDEX.	C98970
97444	MOVE ZERO TO HIST-TABLE [HIST-INDEX].	C98970
97445	IF HIST-INDEX IS LESS THAN HIST-NO-OF-INTERVALS	C98970
97446	THEN GO TO HIST-RST.	C98970
97450	MOVE 1.0 TO HIST-INTERVAL-SIZE.	C98970
97500	NOTE COMPUTE UPPER LIMIT FOR EACH INTERVAL.	C98970
97510	MOVE ZERO TO HIST-INDEX.	C98970
97520	MOVL HIST-VALUE-MI TO HIST-TEMP.	C98970
97530	HIST-INC-INTERVAL.	C98970
97540	ADD 1 TO HIST-INDEX.	C98970
97550	ADD HIST-INTERVAL-SIZE TO HIST-TEMP.	C98970
97560	MOVE HIST-TEMP TO HIST-UPPER-LIMIT [HIST-INDEX].	C98970
97570	IF HIST-INDEX IS LESS THAN HIST-NO-OF-INTERVALS THEN	C98970
97580	GO TO HIST-INC-INTERVAL.	C98970
97600	NOTE PLACE OCCURANCE INTO APPROPRIATE CHANNEL.	C98970
97610	MOVE ZERO TO HIST-INDEX-2.	C98970
97620	HIST-OCCURANCE.	C98970
97630	ADD 1 TO HIST-INDEX-2.	C98970
97640	MOVE HIST-VALUE [HIST-INDEX-2] TO HIST-TEMP.	C98970
97650	MOVL ZERO TO HIST-INDEX.	C98970
97660	HIST-INTERVAL.	C98970
97670	ADD 1 TO HIST-INDEX.	C98970
97675	MOVE FREQ-HIST-VALUE [HIST-INDEX-2] TO A.	C98970

97680	IF HIST-TEMP IS NOT GREATER THAN HIST-UPPER-LIMIT	C98970
97690	[HIST-INDEX] THEN GO TO HIST-ADD-TABLE.	C98970
97700	IF HIST-INDEX IS LESS THAN HIST-NO-OF-INTERVALS THEN GO TO	C98970
97710	HIST-INTERVAL.	C98970
97720	ADD A TO HIST-OUT-RANGE-VALUE.	C98970
97730	GO TO HIST-NO-AUD.	C98970
97740	HIST-ADD-TABLE.	C98970
97750	ADD A TO HIST-TABLE [HIST-INDEX].	C98970
97751	HIST-NO-AUD.	C98970
97760	IF HIST-INDEX-2 IS LESS KNT	C98970
97800	NOTL COMPUTE SCALE VALUE.	C98970
97810	MOVE HIST-TABLE [1] TO HIST-TEMP.	C98970
97820	MOVE 1 TO HIST-INDEX.	C98970
97830	HIST-SCALE.	C98970
97840	ADD 1 TO HIST-INDEX.	C98970
97850	IF HIST-TABLE [HIST-INDEX] IS GREATER THAN HIST-TEMP THEN	C98970
97860	MOVE HIST-TABLE [HIST-INDEX] TO HIST-TEMP.	C98970
97870	IF HIST-INDEX IS LESS THAN HIST-NO-OF-INTERVALS THEN GO TO	C98970
97880	HIST-SCALE.	C98970
97890	COMPUTE HIST-SCALE-VALUE > [HIST-TEMP < 99] / 100.	C98970
97895	IF HIST-SCALE-VALUE LESS THAN 1 MOVE 1 TO HIST-SCALE-VALUE.	C98970
97900	MOVE ZERO TO HIST-INDEX.	C98970
97910	HIST-SCALED-VALUE.	C98970
97920	ADD 1 TO HIST-INDEX.	C98970
97930	COMPUTE HIST-TABLE-SCALD [HIST-INDEX] >	C98970
97940	HIST-TABLE [HIST-INDEX] / HIST-SCALE-VALUE.	C98970
97950	IF HIST-INDEX IS LESS THAN HIST-NO-OF-INTERVALS THEN GO TO	C98970
97960	HIST-SCALED-VALUES.	C98970
98000	NOTE PREPARE OUTPUT DATA.	C98970
98010	DIVIDE 2 INTO HIST-INTERVAL-SIZE.	C98970
98020	MOVE ZERO TO HIST-CUM.	C98970
98030	MOVE ZERO TO HIST-LINE.	C98970
98040	HIST-PREPARE.	C98970
98050	ADD 1 TO HIST-LINE.	C98970
98060	MOVE HIST-LINE TO HIST-LINE-RPT.	C98970
98070	COMPUTE HIST-TEMP > HIST-UPPER-LIMIT [HIST-LINE]	C98970
98080	- HIST-INTERVAL-SIZE.	C98970
98090	MOVE HIST-TEMP TO HIST-MID-POINT-RPT.	C98970
98100	COMPUTE HIST-PERCENT > HIST-TABLE [HIST-LINE] * 100	C98970
98110	/ HIST-NO-OF-DBS.	C98970
98120	MOVE HIST-PERCENT TO HIST-PERCENT-RPT.	C98970
98130	ADD HIST-PERCENT TO HIST-CUM.	C98970
98140	MOVE HIST-CUM TO HIST-CUM-RPT.	C98970
98150	MOVE HIST-TABLE [HIST-LINE] TO HIST-FREQ-RPT.	C98970
98160	MOVE ZERO TO HIST-INDEX.	C98970
98170	IF HIST-DIST IS NOT EQUAL TO 0: GO TO HIST-CUM-1.	C98970
98180	COMPUTE HIST-INDEX-2 > HIST-TABLE-SCALED [HIST-LINE] < 0.5.	C98970
98190	IF HIST-INDEX-2 IS EQUAL TO ZERO GO TO HIST-PREP-SPACE.	C98970
98200	HIST-PREP-HIST.	C98970
98210	ADD 1 TO HIST-INDEX.	C98970
98220	MOVE 0: TO HIST-POINT [HIST-INDEX].	C98970
98230	IF HIST-INDEX IS LESS THAN HIST-INDEX-2 GO TO HIST-PREP-DIST.	C98970
98240	IF HIST-INDEX IS EQUAL TO 100 THEN GO TO HIST-WRITE.	C98970
98250	HIST-PREP-SPACE.	C98970
98260	ADD 1 TO HIST-INDEX.	C98970
98270	MOVE SPACE TO HIST-POINT [HIST-INDEX].	C98970
98280	IF HIST-INDEX IS LESS THAN 100 THEN GO TO HIST-PREP-SPACE.	C98970
98290	GO TO HIST-WRITE.	C98970
98300	HIST-CUM-1.	C98970
98310	ADD 1 TO HIST-INDEX.	C98970
98320	MOVE SPACE TO HIST-POINT [HIST-INDEX].	C98970
98330	IF HIST-INDEX IS LESS THAN 100 THEN GO TO HIST-CUM-1.	C98970
98338	COMPUTE HIST-INDEX > HIST-CUM < 0.5.	C98970
98339	IF HIST-INDEX IS EQUAL TO ZERO GO TO HIST-WRITE.	C98970
98340	MOVE 0: TO HIST-POINT [HIST-INDEX].	C98970
98400	HIST-WRITE.	C98970
98410	WRITE HIST-REC FROM HIST-LINE-OUT.	C98970
98412	ADD 1 TO HIST-LINE-CNT.	C98970
98414	IF HIST-PAGE-FLAG IS EQUAL TO ZERO GO TO HIST-NO-PAGING.	C98970
98415	IF HIST-LINE-CNT IS EQUAL TO HIST-PAGE-FLAG	C98970
98416	THEN PERFORM HIST-PRINT-TITLE.	C98970
98417	HIST-NO-PAGING.	C98970
98420	IF HIST-LINE IS LESS THAN HIST-NO-OF-INTERVALS THEN GO TO	C98970
98430	HIST-PREPARE.	C98970
98440	WRITE HIST-REC FROM HIST-OUT-LINE.	C98970
98450	MOVE HIST-SCALE-VALUE TO HIST-SCALE-RPT.	C98970
98460	WRITE HIST-REC FROM HIST-SCALE-LINE.	C98970
98470	IF HIST-OUT-RANGE-VALUE IS EQUAL TO ZERO GO TO HIST-WRITE-B.	C98970
98480	MOVE HIST-OUT-RANGE-VALUE TO HIST-OUT-RANGE-RPT.	C98970
98490	WRITE HIST-REC FROM HIST-OUT-RANGE-REC.	C98970
98500	HIST-WRITE-B.	C98970
98510	WRITE HIST-REC FROM HIST-OUT-LINE.	C98970
98520	GO TO END-HIST.	C98970
99000	HIST-ERROR-I.	C98970

AD-A045 625

GENERAL DYNAMICS SAN DIEGO CALIF CONVAIR AEROSPACE DIV

F/G 1/5

F-106 SCHEDULED MAINTENANCE STUDY. USER'S MANUAL, (U)

SEP 72 G WANG, R S GROTE, J R COOPER

F41608-71-D-1383

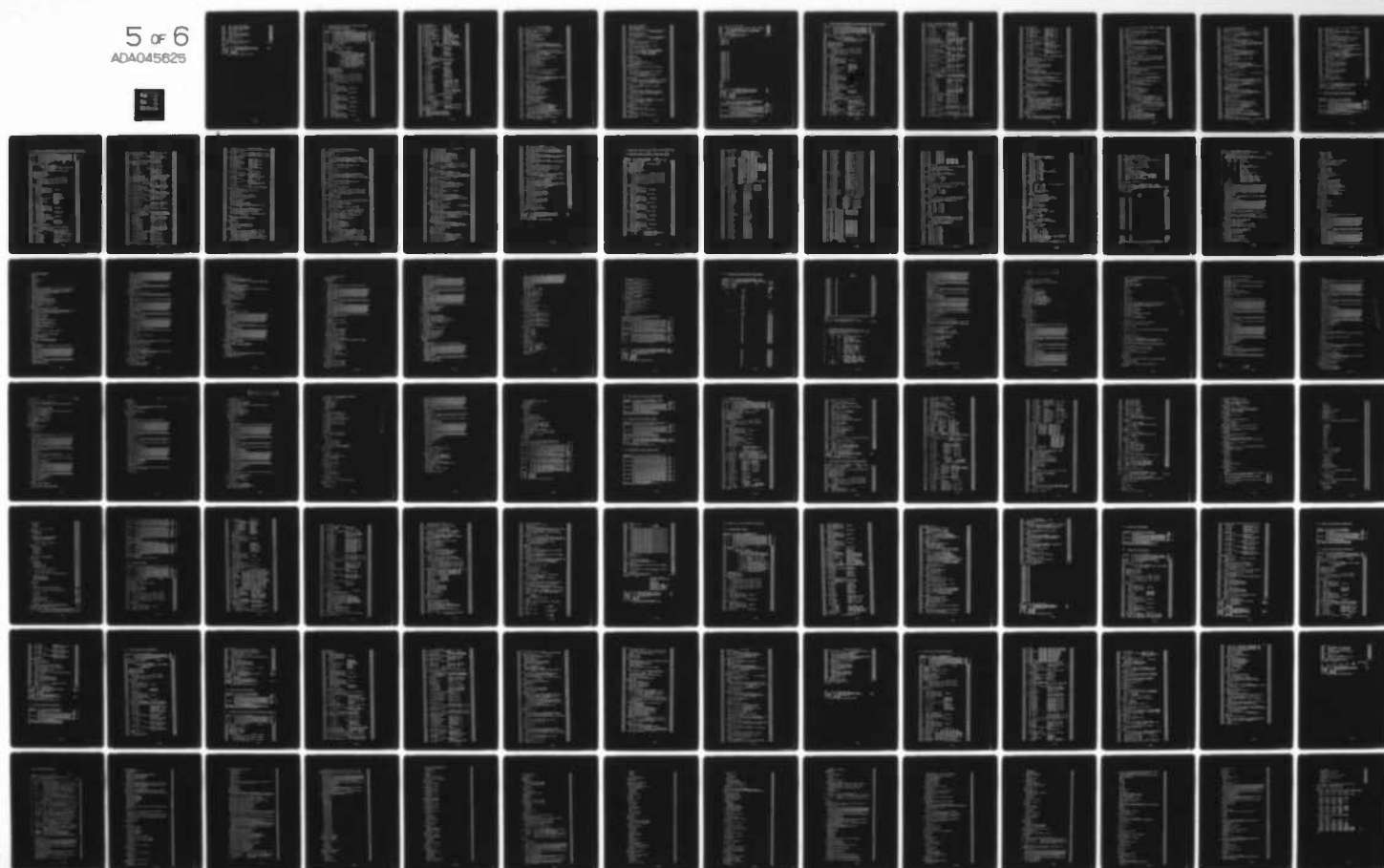
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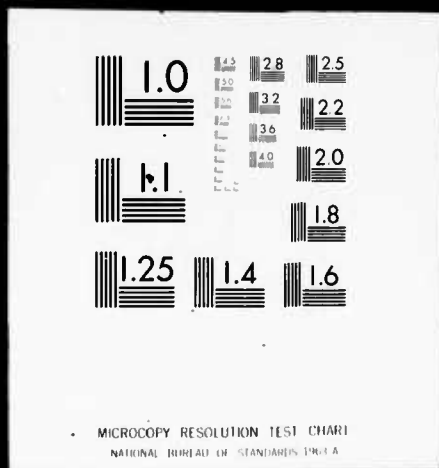
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99010	WRITE HIST-REC FROM HIST-TITLE.	C98970
99020	MOVE HIST-ERR-1 TO HIST-TITLE-1.	C98970
99030	MOVE HIST-NO-OF-CHS TO HIST-ERR-2.	C98970
99040	WRITE HIST-REC FROM HIST-TITLE.	C98970
99050	MOVE :1: TO HIST-FLAG.	C98970
99060	GO TO END-HIST.	C98970
99100	HIST-ERRON-2.	C98970
99110	MOVE HIST-ERR-4 TO HIST-TITLE-1.	C98970
99120	MOVE HIST-ERR-5 TO HIST-TITLE-2.	C98970
99130	WRITE HIST-REC FROM HIST-TITLE.	C98970
99140	MOVE :1: TO HIST-FLAG.	C98970
99150	GO TO END-HIST.	C98970
99200	HIST-ERR-3.	C98970
99210	MOVE :1: TO HIST-FLAG.	C98970
99490	END-HIST. EXIT.	C98970
/*	PLACE COBOL SOURCE BEFORE THIS CARD	
//CHG.TFGIN	DD *SPACE(CYL,1,1)	1440 CDS
TFG DT01	11 0202080	
0515		
*END		
/*	PLACE TFG DATA BEFORE THIS CARD	
//TPR.TU12	DU DISP(COLD,KEEP),VOL(SER)+F1,UNIT(T)+F1	T12
//TPR.TU25	DU DISP(COLD,KEEP),VOL(SER)+F8,UNIT(T)+F8	T25
//TPR.TPHIN	DU *SPACE(TRK,1,1)	
T/P DT01	10100802080	
T/P TU12	10100202020	
T/P TU25	1100130R000	
/*	PLACE T/P CONTROL CARDS BEFORE THIS CARD	

# 6.9 PROGRAMS FOR INTERVAL LENGTH ANALYSES 6.9.1 PREPROCESSOR - TASK III

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//C9897H JOB 01:1 G. WANG. 1,PN7Y>02,7YPRUN>HOLD
//C9897H EXEC P965SL,TIME>03,ACCT>035323007
//CHG.TU14 DU DISP>[PASS],UNIT>[A+F3,2,DEFER],DSN>+C.9897416, 3A
// VOL>SER>[+F3,A+F3,B+F3,C+F3,D+F3,E+F3,F+F3,G+F3,H+F3, CT14/15 1
// 1+F3,J+F3,K+F3,L+F3,M+F3,N+F3,O+F3,P+F3,Q+F3,R+F3,S+F3] T14 2
// //CHG.TU22 DU DISP>[PASS],UNIT>[A+F5,2,DEFER],DSN>+E.9897429, CT22/23 1
// VOL>SER>[+F5,A+F5,B+F5,C+F5,D+F5,E+F5,F+F5,G+F5,H+F5, CT22 2
// 1+F5,J+F5,K+F5,L+F5,M+F5,N+F5,O+F5,P+F5,Q+F5,R+F5,S+F5] T22 3
// //CHG.TU24 DU DISP>[PASS],UNIT>[T+F7,1,DEFER],DSN>+6.9897426, CT24 1
// VOL>SER>[+F7,A+F7,B+F7,C+F7,D+F7,E+F7,F+F7,G+F7,H+F7, CT24 2
// 1+F7,J+F7,K+F7,L+F7,M+F7,N+F7,O+F7,P+F7,Q+F7,R+F7,S+F7] T24 3
// //CHG.INPUT DU //SPACE>[CYL,(1,1)] 1440 CDS
00000 COMBINF COMPILE G. WANG. C98970
01000 IDENTIFICATION DIVISION. C98970
01010 PROGRAM-ID. C9897 C98970
01020 AUTHOR. A. J. ROWKEN. C98970
01030 INSTALLATION. GENERAL DYNAMICS/CONVAIR. C98970
01040 DATE-WRITTEN. 20 MAR 72. C98970
01050 REMARKS. C98970
01060 MAINTENANCE STUDY PROGRAM 3A. C98970
01070 INTERVAL LENGTH ANALYSIS. C98970
01080 TOTAL TASK COMPRISES OF FIVE PARTS C98970
01090 1. CALCULATION OF INTERVALS FOR ALL AIRCRAFT C98970
01100 SUB-SET, FOR BOTH INSPECTION INTERVAL C98970
01110 LENGTHS AND REPAIR ACTION INTERVALS. C98970
01120 ALL OBSERVATION ACCUMULATED IN TWO C98970
01130 TAPE-FILES (PROGRAM 3A) C98970
01140 2. SORTING OF INSPECTION INTERVAL LENGTHS TO C98970
01150 GROUP AIRCRAFT SUB-SETS AND WUC. C98970
01160 3. SORTING OF REPAIR INTERVAL LENGTHS TO C98970
01170 GROUP AIRCRAFT SUB-SETS, WUC AND MMC. C98970
01180 4. PREPARE DISTRIBUTIONS FOR INSPECTION C98970
01190 INTERVALS (PROGRAM 3B). C98970
01200 5. PREPARE DISTRIBUTIONS FOR REPAIR ACTION C98970
01210 INTERVALS (PROGRAM 3C). C98970
02000 ENVIRONMENT DIVISION. C98970
02010 CONFIGURATION SECTION. C98970
02020 SOURCE-COMPUTER. IBM-360. C98970
02030 OBJECT-COMPUTER. IBM-360. C98970
02100 INPUT-OUTPUT SECTION. C98970
02110 FILE-CONTROL. C98970
02120 SELECT IN-FILE-D-B ASSIGN TO UT-S-TU14 C98970
02130 RESERVE 1 ALTERNATE AREA. C98970
02140 SELECT IN-FILE-ISC ASSIGN TO DA-S-UT01 C98970
02150 RESERVE 1 ALTERNATE AREA. C98970
02160 SELECT OUT-FILE-1 ASSIGN TO UT-S-TU22 C98970
02170 RESERVE 1 ALTERNATE AREA. C98970
02200 SELECT OUT-FILL-2 ASSIGN TO UT-S-TU24 C98970
02210 RESERVE 1 ALTERNATE AREA. C98970
10000 DATA DIVISION. C98970
10010 FILE SECTION. C98970
10100 FD IN-FILL-D-B C98970
10120 RECORDING MODE IS F C98970
10130 BLOCK CONTAINS 40 RECORDS C98970
10140 RECORD CONTAINS 70 CHARACTERS C98970
10150 LABEL RECORDS ARE OMITTED C98970
10160 DATA RECORDS ARE IN-REC-D-B. C98970
10200 01 IN-REC-D-B SYNC. C98970
10210 02 FILLER PICTURE X(70). C98970
10220 C98970
11300 FD IN-FILE-ISC C98970
11320 RECORDING MODE IS F C98970
11330 BLOCK CONTAINS 20 RECORDS C98970
11340 RECORD CONTAINS 80 CHARACTERS C98970
11350 LABEL RECORDS ARE STANDARD C98970
11360 DATA RECORDS ARE IN-REC-ISC. C98970
11400 01 IN-REC-ISC SYNC. C98970
11410 02 FILLER PICTURE X(80). C98970
12100 FD OUT-FILE-1 C98970
12120 RECORDING MODE IS F C98970
12130 BLOCK CONTAINS 90 RECORDS C98970
12140 RECORD CONTAINS 20 CHARACTERS C98970
12150 LABEL RECORDS ARE OMITTED C98970
12160 DATA RECORDS ARE OUT-REC-1, C98970
12200 01 OUT-REC-1 SYNC. C98970
12210 02 FILLER PICTURE X(20). C98970
14100 FD OUT-FILL-2 C98970
14120 RECORDING MODE IS F C98970
14130 BLOCK CONTAINS 90 RECORDS C98970
14140 RECORD CONTAINS 20 CHARACTERS C98970
14150 LABEL RECORDS ARE OMITTED C98970
14160 DATA RECORDS ARE OUT-REC-2. C98970

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14200	01 OUT-REC=2 SYNC.		C98970
14210	02 FILLER	PICTURE X(20).	C98970
30000	WORKING-STORAGE SECTION.		C98970
30020	77 CURWEEK SYNC	PICTURE 999,	C98970
30030	77 CUR-SER-NO SYNC	PICTURE XC(8).	C98970
30040	77 CUP-ISCL SYNC	PICTURE X.	C98970
30050	77 KNT SYNC COMPUTATIONAL	PICTURE S999,	C98970
30060	77 WEEK-TEMP SYNC	PICTURE 999,	C98970
30070	77 DELTA-WEEK SYNC	PICTURE S999,	C98970
30080	77 DELTA-FLT-HRS SYNC	PICTURE S999999,	C98970
30090	77 CUR-FLI-HMS SYNC	PICTURE S999999,	C98970
30100	77 FLAG SYNC COMPUTATIONAL	PICTURE S999 VALUE ZERO,	C98970
30130	77 NO-REC-1 SYIC	PICTURE S9C7J VALUE ZERO,	C98970
30140	77 NO-REC-2 SYNC	PICTURE S9C7J VALUE ZERO,	C98970
30170	77 CNT SYNC COMPUTATIONAL	PICTURE S999,	C98970
30380	77 ONE SYNC	PICTURE X VALUE !:	C98970
30390	77 TWO SYNC	PICTURE X VALUE !:	C98970
30400	77 ISC-TEMP SYNC	PICTURE XC(8) VALUE SPACE,	C98970
30410	77 PREV-TESTED-SW SYNC	PICTURE XC(8) VALUE SPACE,	C98970
30420	77 ISC-FLAG SYNC	PICTURE X VALUE SPACE,	C98970
30430	77 MIN-ISC-WEEK SYNC COMPUTATIONAL	PICTURE S999 VALUE <999,	C98970
31010	01 NO-ISC SYNC.		C98970
31020	02 FILLER	PICTURE XX,	C98970
31030	02 NO-ISC-AC	PICTURE S999,	C98970
31040	02 FILLER	PICTURE XC7SJ,	C98970
31050	01 ISC-A-C SYNC.		C98970
31060	02 FILLER	PICTURE XX,	C98970
31070	02 ISC-TN	PICTURE XC(8),	C98970
31080	02 FILLER	PICTURE XX,	C98970
31090	02 ISC-WK	PICTURE 999,	C98970
31100	02 FILLER	PICTURE XC(6S),	C98970
31200	01 FILLER SYNC.		C98970
31205	02 FILLER OCCURS 36 TIMES,		C98970
31210	03 ISC-AA-JN	PICTURE XC(8),	C98970
31220	03 ISC-AA-JWK COMPUTATIONAL	PICTURE S999,	C98970
31300	01 DATA-BANK-INPUT SYNC.		C98970
31310	02 FILLER	PICTURE XC(S),	C98970
31320	02 SERIAL-NL	PICTURE XC(8),	C98970
31330	02 WEEK	PICTURE 999,	C98970
31340	02 WUC	PICTURE XC(S),	C98970
31350	02 WUC-B REDEFINES WUC.		C98970
31360	03 WUC-2	PICTURE XX,	C98970
31370	03 FILLER	PICTURE XXX,	C98970
31380	02 FILLER	PICTURE X,	C98970
31390	02 MMC	PICTURE XXX,	C98970
31400	02 UNITS	PICTURE S999,	C98970
31410	02 FILLER	PICTURE XL2O],	C98970
31420	02 IVENT	PICTURE 9,	C98970
31430	02 FILLER	PICTURE XC4],	C98970
31440	02 FLT-HMS	PICTURE S9C6J,	C98970
31450	02 FILLER	PICTURE XCII},	C98970
31500	01 OUT-DATA SYNC.		C98970
31510	02 CURWUC	PICTURE XC(S),	C98970
31520	02 CURHMC	PICTURE XXX VALUE SPACE,	C98970
31530	02 FILLER	PICTURE X VALUE SPACE,	C98970
31540	02 OBS	PICTURE S9C6J,	C98970
31550	02 FILLER	PICTURE X VALUE SPACE,	C98970
31560	02 ISCHRONAL	PICTURE X,	C98970
31570	02 FILLER	PICTURE X VALUE SPACE,	C98970
31580	02 DATA-TYPE	PICTURE X,	C98970
31590	02 FILLER	PICTURE X VALUE #:,	C98970
31690	01 FILLER SYNC.		C98970
31720	02 WEEK-HMC	PICTURE S999 COMPUTATIONAL,	C98970
31730	02 FLT-HRS-HMC	PICTURE S9C6] COMPUTATIONAL,	C98970
31800	01 NINE SYNC.		C98970
31810	02 FILLER	PICTURE XC20] VALUE 19999999999999999999!	C98970
31820			C98970
41370	01 SPEC-SG=WUC-REC SYNC.	-	C98970
41380	02 SPEC-SG-IUC	PICTURE XC(S),	C98970
41390	02 SPEC-WEEK=A	PICTURE 999,	C98970
41400	02 FILLER	PICTURE XC72],	C98970
45000	01 FILLER SYNC.		C98970
45010	02 SPEC-SGMTC-LIST	PICTURE XC(S)	C98970
45020	OCCURS 10 TIMES,		C98970
45030	02 SPEC-WEEK-LIST	PICTURE 999	C98970
45040	OCCURS 10 TIMES,		C98970
45050	01 NO-SPEC-SG-VJC SYNC	PICTURE S999 COMPUTATIONAL,	C98970
45060	01 SPEC-WUC SYNC	PICTURE XC(S),	C98970
45070	01 SPEC-WEEK SYIC	PICTURE 999,	C98970
45080	01 SPEC-INDEIX SYNC	PICTURE S999 COMPUTATIONAL,	C98970
50000	PROCEDURE DIVISION.		C98970
50010	OPEN-FILES.		C98970
50020	OPEN INPUT II-FILE=D-B, IN-FILE=ISC.		C98970
50040	OPEN OUTPUT OUT-FILE=1, OUT-FILE=2.		C98970
50050	PERFORM READ-ISC-A=C THRU END-RIAC.		C98970
50055	PERFORM READ-SPEC-SG=WUC THRU END-RSSW.		C98970
50060	READ-INITIAL.		C98970

50070	READ IN-FILE-D-B INTO DATA-BANK-INPUT,	C98970
50080	AT END GO TO CLOSE-FILES.	C98970
50100	CHECK-DATA.	C98970
50120	IF IDENT IS EQUAL TO 3 GO TO PROC-III-2.	C98970
50160	IF IDENT IS EQUAL TO 4 GO TO PROC-III-1.	C98970
50170	GO TO READ-IN-INITIAL.	C98970
50200	PROC-III-2.	C98970
50201	PERFORM CHECK-ISCHRONAL THRU END-CI.	C98970
50202	MOVE ISCHRONAL TO CUR-ISC.	C98970
50210	MOVE WUC TO CURWUC.	C98970
50220	MOVE WEEK TO CURWEEK.	C98970
50230	MOVE SERIAL-NO TO CUR-SER-NO.	C98970
50250	MOVE FLT-HRS TO CUR-FLT-HRS.	C98970
50260	GO TO SET-FLAG.	C98970
50300	PROC-III-2A.	C98970
50301	PERFORM CHECK-ISCHRONAL THRU END-CI.	C98970
50302	IF ISCHRONAL IS NOT EQUAL TO CUR-ISC GO TO CHECK-DATA.	C98970
50310	IF WUC IS NOT EQUAL TO CURWUC GO TO CHECK-DATA.	C98970
50320	IF SERIAL-NO IS NOT EQUAL TO CUR-SER-NO GO TO CHECK-DATA.	C98970
50330	MOVE ZERO TO SPEC-INDEX.	C98970
50331	PROC-III-2H.	C98970
50332	ADD 1 TO SPEC-INDEX.	C98970
50333	IF WUC IS EQUAL TO SPEC-SGWUC-LIST [SPEC-INDEX] GO TO	C98970
50334	PROC-SPEC-SGWUC.	C98970
50335	IF SPEC-INDEX IS LESS THAN NO-SPEC-SG-WUC GO TO PROC-III-2B.	C98970
50337	IF UNITS IS NEGATIVE GO TO READ-SUB.	C98970
50340	COMPUTE DELTA-WEEK > WEEK - CURWEEK - 1.	C98970
50350	MOVE WEEK TO CURWEEK.	C98970
50360	COMPUTE DELTA-FLT-HRS > FLT-HRS - CUR-FLT-HRS.	C98970
50380	MOVE FLT-HRS TO CUR-FLT-HRS.	C98970
50400	IF FLAG EQUAL ZERO GO TO SET-FLAG.	C98970
50410	MOVE DELTA-WEEK TO OBS.	C98970
50420	MOVE ONE TO DATA-TYPE.	C98970
50430	WRITE OUT-REC-2 FROM OUT-DATA.	C98970
50440	MOVE DELTA-FLT-HRS TO OBS.	C98970
50450	MOVE TWO TO DATA-TYPE.	C98970
50460	WRITE OUT-REC-2 FROM OUT-DATA.	C98970
50465	ADD 2 TO NO-REC-2.	C98970
50500	SET-FLAG.	C98970
50510	MOVE 1 TO FLAG.	C98970
50520	IF UNITS IS EQUAL TO ZERO THEN MOVE ZERO TO FLAG.	C98970
50525	READ-SUB.	C98970
50530	READ IN-FILL-D-B INTO DATA-BANK-INPUT,	C98970
50540	AT END GO TO CLOSE-FILES.	C98970
50550	GO TO PROC-III-2A.	C98970
50600	PROC-SPEC-SGWUC.	C98970
50610	COMPUTE DELTA-WEEK > WEEK - CURWEEK - 1.	C98970
50615	SUBTRACT 2 FROM SPEC-WEEK-LIST [SPEC-INDEX] GIVING SPEC-WEEK.	C98970
50620	IF DELTA-WEEK IS GREATER THAN SPEC-WEEK GO TO	C98970
50625	END-SG-WUC-INSPEC.	C98970
50630	NOT-END-SG-WUC-INSPEC.	C98970
50640	MOVE FLT-HRS TO CUR-FLT-HRS.	C98970
50650	MOVE WEEK TO CURWEEK.	C98970
50660	GO TO READ-SUB.	C98970
50700	END-SG-WUC-INSPEC.	C98970
50710	MOVE DELTA-WEEK TO OBS.	C98970
50720	MOVE ONE TO DATA-TYPE.	C98970
50730	WRITE OUT-REC-2 FROM OUT-DATA.	C98970
50740	COMPUTE OBS > FLT-HRS - CUR-FLT-HRS.	C98970
50750	MOVE TWO TO DATA-TYPE.	C98970
50760	WRITE OUT-REC-2 FROM OUT-DATA.	C98970
50770	ADD 2 TO NO-REC-2.	C98970
50780	GO TO NOT-END-SG-WUC-INSPEC.	C98970
51000	PROC-III-1.	C98970
51030	MOVE WUC TO CURWUC.	C98970
51040	PERFORM CHECK-ISCHRONAL THRU END-CI.	C98970
51050	MOVE SERIAL-NO TO CUR-SER-NO.	C98970
51060	MOVE ISCHRONAL TO CUR-ISC.	C98970
51070	MOVE HMC TO CURHMC.	C98970
51080	MOVE WEEK TO WEEK-HMC.	C98970
51090	MOVE FLT-HRS TO FLT-HRS-HMC.	C98970
51100	READ-III-1.	C98970
51110	READ IN-FILE-D-B INTO DATA-BANK-INPUT,	C98970
51120	AT END GO TO CLOSE-FILES.	C98970
51130	IF IDENT IS EQUAL TO 9 THEN GO TO CLOSE-FILES.	C98970
51140	IF IDENT IS NOT EQUAL TO 4 GO TO READ-III-1.	C98970
51145	IF UNITS IS EQUAL TO ZERO GO TO READ-III-1.	C98970
51150	IF HMC IS NOT EQUAL TO CURHMC GO TO PROC-III-1.	C98970
51160	IF SERIAL-NO IS NOT EQUAL TO CUR-SER-NO GO TO PROC-III-1.	C98970
51170	IF WUC IS NOT EQUAL TO CURWUC GO TO PROC-III-1.	C98970
51180	PERFORM CHECK-ISCHRONAL THRU END-CI.	C98970
51190	IF ISCHRONAL IS NOT EQUAL TO CUR-ISC GO TO PROC-III-1.	C98970
51300	WRITE-HMC.	C98970
51310	COMPUTE DELTA-WEEK > WEEK - WEEK-HMC.	C98970
51320	COMPUTE DELTA-FLT-HRS > FLT-HRS - FLT-HRS-HMC.	C98970
51340	MOVE WEEK TO WEEK-HMC.	C98970

51350	MOVE FLI-HRS TO FL7-HRS-HMC.	C98970
51360	MOVE DELTA-WEEK TO OBS.	C98970
51370	MOVE ONE TO LITA-TYPE.	C98970
51390	WRITE OUT-REC-1 FROM OUT-DATA.	C98970
51395	ADD 1 TO NO-REC-1.	C98970
51397	IF UNITS IS GREATER THAN <1 PERFORM WRITE-ZERO-DATA THRU	C98970
51398	END-WRITE-ZERO-DATA.	C98970
51400	MOVE DELTA-FLT-HRS TO OBS.	C98970
51410	MOVE TWO TO DATA-TYPE.	C98970
51420	WRITE OUT-REC-1 FROM OUT-DATA.	C98970
51425	ADD 1 TO NO-REC-1.	C98970
51430	IF UNITS IS GREATER THAN <1 PERFORM WRITE-ZERO-DATA THRU	C98970
51432	END-WRITE-ZERO-DATA.	C98970
51480	GO TO PROC-1:1-1.	C98970
51800	CLOSE-FILES.	C98970
51810	COMPUTE KNT > NO-REC-1 - NO-REC-1 / 90 * 90.	C98970
51820	IF KNT IS ZERO GO TO CF-2.	C98970
51830	PERFORM NINE-FILL-1 THRU N-F-1.	C98970
51840	CF-2.	C98970
51850	COMPUTE KNT > NO-REC-2 - NO-REC-2 / 90 * 90.	C98970
51860	IF KNT IS ZERO GO TO CF-3.	C98970
51870	PERFORM NINE-FILL-2 THRU N-F-2.	C98970
51900	CF-3.	C98970
51910	DISPLAY : NUMBER RECORDS-1 1 NO-REC-1 UPON CONSOLE.	C98970
51920	DISPLAY : NUMBER RECORDS-2 1 NO-REC-2 UPON CONSOLE.	C98970
51940	DISPLAY : END OF JOB C98970 UPON CONSOLE.	C98970
51950	CLOSE IN-FILE=D-B, OUT-FILE-1, IN-FILE=ISC,	C98970
51960	OUT-FILE-2 WITH LOCK.	C98970
51990	GOBACK.	C98970
52000	WRITE-ZERO-DATA.	C98970
52010	MOVE UNITS TO CNT.	C98970
52020	MOVE ZERO TO OBS.	C98970
52030	W-Z-O.	C98970
52040	SUBTRACT 1 FROM CNT.	C98970
52050	WRITE OUT-REC-1 FROM OUT-DATA.	C98970
52055	ADD 1 TO NO-REC-1.	C98970
52060	IF CNT IS GREATER THAN 1 GO TO W-Z-O.	C98970
52070	END-WRITE-ZERO-DATA.	C98970
70000	READ-ISC-A-C.	C98970
70010	READ IN-FILE-ISC INTO NO-ISC A7 END GO TO END-RIAC.	C98970
70020	MOVE ZERO TO KNT.	C98970
70030	RIAC.	C98970
70040	ADD 1 TO KNT.	C98970
70050	READ IN-FILE-ISC INTO ISC-A-C A7 END GO TO END-RIAC.	C98970
70060	MOVE ISC-TN TO ISC-AC-TN (KNT).	C98970
70070	MOVE ISC-WK TO ISC-AC-WK (KNT).	C98970
70075	IF ISC-WK IS LESS THAN MIN-ISC-WEEK MOVE ISC-WK	C98970
70076	TO MIN-ISC-WEEK.	C98970
70080	IF KNT IS LESS THAN NO-ISC-AC GO TO RIAC.	C98970
70090	END-RIAC. EXIT.	C98970
70200	CHECK-ISCHRONAL.	C98970
70210	IF SERIAL-NO IS NOT EQUAL TO PREV-TESTED-SN GO TO CHECK-I-2.	C98970
70220	IF ISC-FLAG IS EQUAL TO TWO GO TO END-CI.	C98970
70230	IF ISCHRONAL IS EQUAL TO ONE AND WEEK IS NOT LESS THAN	C98970
70232	MIN-ISC-WEEK, THEN GO TO END-CI.	C98970
70240	CHECK-I-2.	C98970
70250	MOVE TWO TO ISCHRONAL.	C98970
70260	IF WEEK IS LESS THAN MIN-ISC-WEEK GO TO END-CI.	C98970
70270	MOVE ZERO TO CNT.	C98970
70280	CHECK-I-1.	C98970
70290	ADD 1 TO CNT.	C98970
70300	MOVE ISC-AC-WK (CNT) TO ISC-TEMP.	C98970
70310	IF SERIAL-NO IS LESS THAN ISC-TEMP GO TO CHECK-I-4.	C98970
70320	IF SERIAL-NO IS EQUAL TO ISC-TEMP GO TO CHECK-I-1A.	C98970
70330	IF CNT IS LESS THAN NO-ISC-AC GO TO CHECK-I-1.	C98970
70340	CHECK-I-4.	C98970
70350	MOVE TWO TO ISC-FLAG.	C98970
70360	GO TO CHECK-I-3.	C98970
70370	CHECK-I-1A.	C98970
70380	MOVE ISC-AC-WK (CNT) TO WEEK-TEMP.	C98970
70390	IF WEEK-TEMP IS EQUAL TO WEEK OR WEEK IS GREATER THAN	C98970
70400	WEEK-TEMP MOVE ONE TO ISCHRONAL.	C98970
70410	MOVE ONE TO ISC-FLAG.	C98970
70430	CHECK-I-3.	C98970
70440	MOVE SERIAL-NO TO PREV-TESTED-SN.	C98970
70450	END-CI. EXIT.	C98970
70510	NINE-FILL-2.	C98970
70520	WRITE OUT-REC-2 FROM NINE.	C98970
70530	ADD 1 TO KNT.	C98970
70540	IF KNT IS LESS THAN 90 GO TO NINE-FILL-2.	C98970
70550	N-F-2. EXIT.	C98970
70600	NINE-FILL-1.	C98970
70610	WRITE OUT-REC-1 FROM NINE.	C98970
70620	ADD 1 TO KNT.	C98970
70630	IF KNT IS LESS THAN 90 GO TO NINE-FILL-1.	C98970
70640	N-F-1. EXIT.	C98970
85000	READ-SPEC-SG-WUC.	C98970

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85010      MOVL ZERO TO NO-SPEC-S6-WUC.                      C98970
85020      READ-SPEC.                                         C98970
85030      READ 1N-FILE-1SC INTO SPEC-S6-WUC-REC AT END 00 TO END-RSSW. C98970
85040      ADD 1 TO NO-PEC-S6-WUC.                            C98970
85050      MOVE SPEC-S6-WUC TO SPEC-S6WUC-LIST [NO-SPEC-S6-WUC]. C98970
85060      MOVE SPEC-WEEK-A TO SPEC-WEEK-LIST [NO-SPEC-S6-WUC]. C98970
85070      GO TO READ-SPEC.                                    C98970
85090      END-RSSW. EXIT.                                     C98970
/*          PLACE CONTROL SOURCE BEFORE THIS CARD
//CHG,IFIN      DU      *SPACE>[CYL,[1,1]]                  1440 CDS
TFG U101      11 000208
      34
57000236 331
57000237 331
57000243 324
57000244 331
57002545 331
58000776 324

```

```

58000901 331
59000002 331
59000003 331
59000005 331
59000006 331
59000010 331
59000012 331
59000015 331
59000018 331
59000019 331
59000026 331
59000030 331
59000054 324
59000057 324
59000058 324
59000059 324
59000104 331
59000105 331
59000108 324
59000110 324
59000119 324
59000141 324
59000143 324
59000144 324
59000145 324
59000147 324
59000151 324
59000152 324

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```

03300 3
03310 3
03320 3
03330 3
03400 5
03600 5

```

```

*END
/*          PLACE TFG DATA BEFORE THIS CARD
//TPR,TU14      DU      DIS>[OLD,KEEP],VOL>SER>+F3,UNIT>T+F3      T14
//TPR,TU22      DU      DIS>[OLD,KEEP],VOL>SER>+F5,UNIT>T+F5      T22
//TPR,TU24      DU      DIS>[OLD,KEEP],VOL>SER>+F7,UNIT>T+F7      T24
//TPR,TPR1N     DU      *SPACE>[TRK,[1,1]]
T/P DT01      1010080208
T/P TU14      1010070207
T/P TU22      1010020200
T/P TU24      1010020200
/*          PLACE T/P CONTROL CARDS BEFORE THIS CARD

```

## C.9.2 SORT FOR INSPECTION LENGTH INTERVALS

```

//C9897F EXEC  P4622N,W000,TIME>03,ACCT>035323007          385
//CHG.SORT1N   DD  DIS>[KEEP],UNIT>[A+F5,2,DEFER],          CT22/23 1
//              DSN>+E,9897426,                              CT22 2
//              VOL>SLR>+F5,A+F5,B+F5,C+F5,D+F5,E+F5,F+F5,G+F5,H+F5, CT22 3
//              1+F5,J+F5,K+F5,L+F5,M+F5,N+F5,O+F5,P+F5,Q+F5,R+F5,S+F5,CT22 4
//              DCH>[LRECL>0020,RLKSIZE>1800],LAHEL>[NSL,RETPD>099]
//CHG.SORTOUT  DU  DIS>[KEEP],UNIT>[A+F1,2,DEFER],DSN>+A,9897427, CT12/13 1
//              VOL>SER>[+F1,A+F1,B+F1,C+F1,D+F1,E+F1,F+F1,G+F1,H+F1, CT12 2
//              1+F1,J+F1,K+F1,L+F1,M+F1,N+F1,O+F1,P+F1,Q+F1,R+F1,S+F1],CT12 3
//              DCH>[LRECL>0020,RLKSIZE>1800]
//CHG.SYSIN    DU  *DLB>BLKSIZE>0080,SPACE>[TRK,[1,1]]
SORT FIELDS>[017,001,1H,A,019,001,CH,A,001,005,CH,A],SIZE>E0200000
MODS E15>[E15,008,SORTLIB,N],E18>[E18,024,SORTLIB,N]
/*

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### 6.9.3 CUMULATIVE DISTRIBUTION FOR INSPECTION LENGTH INTERVALS

```

//C9897E EXEC P9655L,TIME>04,ACCT>035323007
//CHG.TU12 DD DISP>[PASS],UNIT>[T+F1,I,DEFER],DSN>A.9897427,
// VOL>SER>L+F1,A+F1,B+F1,C+F1,D+F1,E+F1,F+F1,G+F1,H+F1,
// I+F1,J+F1,K+F1,L+F1,M+F1,N+F1,O+F1,P+F1,Q+F1,R+F1,S+F1
//CHG.TU25 DU DISP>[PASS],UNIT>[T+F8,I,DEFER],DSN>H.9897428,
// VOL>SER>L+F8,A+F8,B+F8,C+F8,D+F8,E+F8,F+F8,G+F8,H+F8,
// I+F8,J+F8,K+F8,L+F8,M+F8,N+F8,O+F8,P+F8,Q+F8,R+F8,S+F8
//CHG.INPUT DU *S'ACE>[CYL,[1,1]]
00000 COMBINE COMPILE 6. WANG.
01050 REMARKS.
01060 MAINTENANCE STUDY PROGRAM 3B.
01070 INSPECTION INTERVAL LENGTHS.
01080 PREPARES CUMULATIVE DISTRIBUTION OF INSPECTION
01090 INTERVAL LENGTHS.
01110 AIRCRAFT SUB-SET, DATA-TYPE, WUC.
02000 ENVIRONMENT DIVISION.
02010 CONFIGURATION SECTION.
02020 SOURCE-COMPUTER, IBM-360.
02030 OBJECT-COMPUTER, IBM-360.
02100 INPUT-OUTPUT SECTION.
02110 FILE-CONTROL.
02120 SELECT IN-FILE ASSIGN TO UT-S-TU12
02130 RESERVE 1 ALTERNATE AREA.
02140 SELECT HIST-FILE ASSIGN TO UT-S-TU25
02150 RESERVE 1 ALTERNATE AREA.
09000 SELECT CUT-OFF-FILE ASSIGN TO DA-S-DT03
09010 RESERVE 1 ALTERNATE AREA.
10000 DATA DIVISION.
10010 FILE SECTION.
11000 FD IN-FILE
11120 RECORDING MODE IS F
11130 BLOCK CONTAINS 90 RECORDS
11140 RECORD CONTAINS 20 CHARACTERS
11150 LABEL RECORDS ARE OMITTED
11160 DATA RECORDS ARE IN-REC.
11170 01 IN-REC SYNC.
11180 02 WUC PICTURE X(5).
11182 02 FILLER PICTURE X(4).
11183 02 OBS PICTURE S9(6).
11184 02 OBS-1 REFINES OBS PICTURE S999999.
11185 02 FILLER PICTURE X.
11186 02 ISCHRONAL-NEW PICTURE X.
11187 02 FILLER PICTURE X.
11188 02 DATA-TYPE-NEW PICTURE X.
11189 02 FILLER PICTURE X.
12100 FD HIST-FILE
12120 RECORDING MODE IS F
12130 BLOCK CONTAINS 15 RECORDS
12140 RECORD CONTAINS 130 CHARACTERS
12150 LABEL RECORDS ARE OMITTED
12160 DATA RECORDS ARE HIST-REC.
12170 01 HIST-REC SYNC.
12180 02 FILLER PICTURE X(130).
29000 FD CUT-OFF-FILE
29010 RECORDING MODE IS F
29020 BLOCK CONTAINS 20 RECORDS
29030 RECORD CONTAINS 80 CHARACTERS
29040 LABEL RECORDS ARE STANDARD
29050 DATA RECORDS ARE CUT-OFF-REC.
29060 01 CUT-OFF-REC SYNC.
29070 05 NI-CUT-OFF PICTURE 9(5).
29080 05 ISO-CUT-OFF PICTURE 9(5).
29090 05 FILLER PICTURE X(70).
30000 WORKING-STORAGE SECTION.
30010 77 KNT SYNC PICTURE S9(5).
30020 01 FILLER SYNC.
30030 02 FREQ-HIS-VALUE OCCURS 1000 TIMES PICTURE S9(5)
30040 COMPUTATIONAL.
30050 01 A PICTURE S9(5) COMPUTATIONAL.
30060 01 NO-OF-HISTS SYNC PICTURE 9999 VALUE ZERO.
30070 01 TWO SYNC PICTURE X VALUE 121.
30080 01 ONE SYNC PICTURE X VALUE 111.
30090 01 CNT SYNC PICTURE S9(5) COMPUTATIONAL.
30100 01 CUR-WUC-T SYNC.
30110 02 FILLER PICTURE X(5) VALUE 1 WUC>1.
30120 02 CUR-WUC PICTURE X(5).
30170 01 ISCHRONAL SYNC PICTURE X.
30180 01 DATA-TYPE SYNC PICTURE X.
30190 01 MINUS-ONE COMPUTATIONAL PICTURE S999 VALUE -1 SYNC.
32000 01 REPORT-ID SYNC.
32010 02 FILLER
32020 199807860 TF7919-02 142-8 1 1/2 1.
32030 02 FILLER PICTURE X(50) VALUE SPACE.
32040 02 FILLER PICTURE X(30) VALUE

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32050      ?
46000 01 MEAN COMPUTATIONAL SYNC PICTURE S9(7)V99. C98970
46010 01 VARIANCE COMPUTATIONAL SYNC PICTURE S9(7)V99. C98970
46020 01 TEMP-COMP PICTURE S9(7)V99. C98970
46100 01 MEAN-VARIANCE-LINE SYNC. C98970
46110 02 FILLER PICTURE X(50) VALUE C98970
46120 :S C98970
46130 02 FILLER PICTURE X(19) VALUE C98970
46140 : MEAN >: C98970
46150 02 MEAN-RPT PICTURE ZZZ9.9. C98970
46160 02 FILLER PICTURE X(30) VALUE C98970
46170 : VARIANCE >: C98970
46180 02 VARIANCE-RPT PICTURE ZZZZZ9.9. C98970
46190 02 FILLER PICTURE X(16) VALUE C98970
46200 : C98970
47000 01 HIST-VALUE-MAX SYNC PICTURE S9999V99 VALUE -9999.9. C98970
47010 01 HIST-VALUE-MIN SYNC PICTURE S9999V99 VALUE <9999.9. C98970
47020 01 HIST-NO-OF-OBS SYNC PICTURE S9(5) VALUE ZERO. C98970
47030 01 HIST-NO-OF-INTERVALS SYNC PICTURE 999V99 VALUE 50. C98970
47040 01 HIST-INPUT-VMAX-VMIN SYNC PICTURE 9 VALUE ZERO. C98970
47050 01 HIST-DIST SYNC PICTURE X VALUE :1:. C98970
47060 01 HIST-INDEX SYNC COMPUTATIONAL C98970
47070 PICTURE S999 VALUE ZERO. C98970
47080 01 HIST-INDEX-2 SYNC COMPUTATIONAL C98970
47090 PICTURE S999 VALUE ZERO. C98970
47100 01 HIST-TEMP SYNC PICTURE S99999V99 VALUE ZERO. C98970
47110 01 HIST-INTERVA.-SIZE SYNC PICTURE S999V99 VALUE ZERO C98970
47120 COMPUTATIONAL. C98970
47150 01 HIST-FLAG SYNC PICTURE X VALUE :0:. C98970
47160 01 HIST-SCALE-VALUE SYNC COMPUTATIONAL C98970
47170 PICTURE S999 VALUE <1. C98970
47180 01 HIST-PERCENT SYNC PICTURE S999V99 COMPUTATIONAL. C98970
47190 01 HIST-CUM SYNC PICTURE S999V99 COMPUTATIONAL. C98970
47200 01 HIST-LINE SYNC COMPUTATIONAL C98970
47210 PICTURE S999 VALUE ZERO. C98970
47220 01 HIST-PAGE-FLAG SYNC PICTURE S999 VALUE <75. C98970
47230 01 HIST-LINE-CNT SYNC PICTURE S999. C98970
47300 01 HIST-ERR-1 SYNC PICTURE X(10) VALUE C98970
47310 :ERROR NO 0: C98970
47320 01 HIST-ERR-3 SYNC. C98970
47330 02 FILLER PICTURE X(5) VALUE :BS > 1. C98970
47340 02 HIST-ERR-2 PICTURE S9(5) VALUE ZERO. C98970
47350 01 HIST-ERR-4 SYNC PICTURE X(10) VALUE C98970
47360 :ERROR MAX: C98970
47370 01 HIST-ERR-5 SYNC PICTURE X(10) VALUE C98970
47380 :=-MIN BAD. : C98970
47390 01 HIST-OUT-RANGE-VALUE SYNC PICTURE S999 COMPUTATIONAL. C98970
47500 01 FILLER SYNC. C98970
47510 02 FILLER 0 CURS 200 TIMES. C98970
47530 03 HIST-TABLE PICTURE S9(5) COMPUTATIONAL. C98970
47540 03 HIST-UPPER-LIMIT PICTURE S9999V99 COMPUTATIONAL. C98970
47550 03 HIST-TABLE-SCALED PICTURE S999V99 COMPUTATIONAL. C98970
47560 01 HIST-NEW-PAGE SYNC. C98970
47570 02 FILLER PICTURE X VALUE :1:. C98970
47580 02 FILLER PICTURE X(12) VALUE SPACE. C98970
47582 02 FILLER PICTURE X(5) VALUE :PAGE :. C98970
47584 02 HIST-PAGE-NO PICTURE 9. C98970
47590 02 FILLER PICTURE X VALUE :1:. C98970
47600 01 HIST-TITLE SYNC. C98970
47610 02 FILLER PICTURE X(3) VALUE :S :. C98970
47620 02 HIST-TITLE-1. C98970
47621 03 FILLER PICTURE X(10) VALUE SPACE. C98970
47630 02 HIST-TITLE-2. C98970
47631 03 FILLER PICTURE X(10) VALUE SPACE. C98970
47640 02 HIST-TITLE-3 PICTURE X(10) VALUE SPACE. C98970
47650 02 HIST-TITLE-4 PICTURE X(10) VALUE SPACE. C98970
47660 02 FILLER PICTURE X(24) VALUE C98970
47670 : NO OF OBSERVATIONS >: C98970
47680 02 HIST-NO-OF-OBS-RPT PICTURE ZZZZ9. C98970
47690 02 FILLER PICTURE X(13) VALUE C98970
47700 : VALUE MAX > :. C98970
47710 02 HIST-VALUE-MAX-RPT PICTURE -----9. C98970
47720 02 FILLER PICTURE X(13) VALUE C98970
47730 : VALUE MIN > :. C98970
47740 02 HIST-VALUE-MIN-RPT PICTURE -----9. C98970
47750 02 FILLER PICTURE X(18) VALUE C98970
47760 : C98970
47900 01 HIST-UNIT-LINE SYNC. C98970
47910 02 FILLER PICTURE X(50) VALUE C98970
47920 :/-----: C98970
47922 02 FILLER PICTURE X(80) VALUE C98970
47930 :-----: C98970
47940 :-----: C98970
47950 01 HIST-LABEL SYNC. C98970
47960 02 FILLER PICTURE X(50) VALUE C98970
47970 :/ MIDPNT PCNT CUM FREQ 1...5...10...15...20...1. C98970
47974 02 FILLER PICTURE X(40) VALUE :. C98970
47980 :25...30...35...40...45...50...55...60...65...70...75...80... C98970
47990 :85...90...95...100: C98970

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48000	01	HIST-LINE-OUT SYNC.		C98970
48010	02	FILLER	PICTURE X VALUE 1/1.	C98970
48020	02	HIST-LINE-RPT	PICTURE Z29.	C98970
48030	02	FILLER	PICTURE X VALUE SPACE.	C98970
48040	02	HIST-MID-POINT-RPT	PICTURE ----.9.	C98970
48060	02	HIST-PERCENT-RPT	PICTURE Z29.9.	C98970
48070	02	FILLER	PICTURE X VALUE SPACE.	C98970
48080	02	HIST-CUM RPT	PICTURE Z29.9.	C98970
48100	02	HIST-FREQ-RPT	PICTURE ZZZ29.	C98970
48110	02	FILLER	PICTURE X VALUE SPACE.	C98970
48120	02	HIST-POINT OCCURS 100 TIMES		C98970
48130			PICTURE X.	C98970
48140	02	FILLER	PICTURE X VALUE 1/1.	C98970
48150	01	HIST-OUT-RANGE-REC SYNC.		C98970
48160	02	FILLER	PICTURE X(35) VALUE	C98970
48170		:/ NUMBER OF OUT OF RANGE VALUES >1.		C98970
48180	02	HIST-OUT-RANGE-RPT	PICTURE Z29.	C98970
48190	02	FILLER	PICTURE X(91) VALUE SPACE.	C98970
48191	02	FILLER	PICTURE X VALUE 1/1.	C98970
48200	01	HIST-SCALE-LINE SYNC.		C98970
48210	02	FILLER	PICTURE X(27) VALUE	C98970
48220		:/ SCALING FACTOR > 1.		C98970
48230	02	HIST-SCALE-RPT	PICTURE Z29.	C98970
48240	02	FILLER	PICTURE X(99) VALUE SPACE.	C98970
48250	02	FILLER	PICTURE X VALUE 1/1.	C98970
48300	01	FILLER SYNC.		C98970
48310	02	HIST-VALUE OCCURS 1000 TIMES		C98970
48320			PICTURE S9999V9 COMPUTATIONAL.	C98970
50000		PROCEDURE DIVISION.		C98970
50001		OPEN INPUT CUT-OFF-FILE.		C98970
50002		READ CUT-OFF-FILE AT END GO TO CLOSE-FILES.		C98970
50003		CLOSE CUT-OFF-FILE WITH LOCK.		C98970
50010		OPEN INPUT IN-FILE.		C98970
50020		OPEN OUTPUT HIST-FILE.		C98970
50030		MOVE 1000 TO CNT.		C98970
50040		PERFORM RESET-TABLE THRU ENO-RST-TABLE.		C98970
50050		READ IN-FILE, AT END GO TO CLOSE-FILES.		C98970
50060		WRITE HIST-REC FROM REPORT-ID.		C98970
50100		PARA-1.		C98970
50110		MOVE 1 TO HIST-NO-OF-OBS.		C98970
50120		MOVE WUC TO CUR-WUC.		C98970
50140		MOVE DATA-TYPE-NEW TO DATA-TYPE.		C98970
50150		MOVE ISCHRONAL-NEW TO ISCHRONAL.		C98970
50160		IF DATA-TYPE IS EQUAL TO ONE GO TO WEEKS-DATA ELSE GO TO		C98970
50170		FLT-DATA.		C98970
50200		READ1.		C98970
50210		READ IN-FILE, AT END GO TO CLOSE-FILES.		C98970
50220		IF DATA-TYPE-NEW IS EQUAL TO 9: GO TO CLOSE-FILES.		C98970
50230		IF WUC IS NOT EQUAL TO CUR-WUC GO TO PARA-2.		C98970
50250		ADD 1 TO HIST-NO-OF-OBS.		C98970
50260		IF DATA-TYPE IS EQUAL TO ONE GO TO WEEKS-DATA ELSE GO TO		C98970
50270		FLT-DATA.		C98970
50300		PARA-2.		C98970
50310		PERFORM SET-HISTOG THRU END-SH.		C98970
50320		PERFORM RESET-TABLE THRU ENO-RST-TABLE.		C98970
50330		GO TO PARA-1.		C98970
50400		RESET-TABLE.		C98970
50410		MOVE ZERO TO CNT.		C98970
50420		RST.		C98970
50430		ADD 1 TO CNT.		C98970
50440		MOVE MINUS-ONE TO HIST-VALUE [CNT].		C98970
50445		MOVE ZERO TO FREQ-HIST-VALUE [CNT].		C98970
50450		IF CNT IS LESS THAN KNT GO TO RST.		C98970
50455		MOVE ZERO TO CNT.		C98970
50460		ENO-RST-TABLE, EXIT.		C98970
50510		SET-HISTOG.		C98970
50512		IF ISCHRONAL IS EQUAL TO ONE AND HIST-NO-OF-OBS IS NOT		C98970
50514		GREATER THAN ISO-CUT-OFF GO TO END-SH.		C98970
50516		IF ISCHRONAL IS EQUAL TO TWO AND HIST-NO-OF-OBS IS NOT		C98970
50518		GREATER THAN NI-CUT-OFF GO TO END-SH.		C98970
50520		IF ISCHRONAL IS EQUAL TO ONE MOVE 1 ISO 1 TO		C98970
50530		HIST-TITLE-4, ELSE MOVE 1 NON-ISO 1 TO HIST-TITLE-4.		C98970
50540		IF DATA-TYPE IS EQUAL TO ONE MOVE 1 WEEKS 1 TO		C98970
50550		HIST-TITLE-3, ELSE MOVE 1 FLT-HOURS 1 TO HIST-TITLE-3.		C98970
50560		MOVE CUR-WUC-1 TO HIST-TITLE-1.		C98970
50590		PERFORM WRITE-HISTOGRAM THRU ENO-HIST.		C98970
50600		IF HIST-FLAG IS EQUAL TO 111 THEN GO TO CFI.		C98970
50610		ADD 1 TO NO-OF-HISTS.		C98970
50620		END-SH, EXIT.		C98970
51000		WEEKS-DATA.		C98970
51010		MOVE ZERO TO CNT.		C98970
51020		WEEK-A.		C98970
51030		ADD 1 TO CNT		C98970
51040		IF OBS IS EQUAL TO HIST-VALUE [CNT] GO TO WEEK-C.		C98970
51050		IF FREQ-HIST-VALUE [CNT] IS EQUAL TO ZERO GO TO WEEK-B.		C98970
51060		IF CNT IS LESS THAN 1000 GO TO WEEK-A.		C98970

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51070      DISPLAY : MORE THAN 1000 FREQUENCY OCCURENCES : UPON CONSOLE. C98970
51080      GO TO CF1. C98970
51090 WEEK-B. C98970
51100      MOVE OBS T7 HIST-VALUE [CNT]. C98970
51110      IF CNT IS GREATER THAN KNT THEN MOVE CNT TO KNT. C98970
51120 WEEK-C. C98970
51130      ADD 1 TO FREQ-HIST-VALUE [CNT]. C98970
51140      GO TO READ1. C98970
52000 FLT-DATA. C98970
52010      MOVE ZERO TO CNT. C98970
52020 FLT-A. C98970
52030      ADD 1 TO CNT. C98970
52040      IF OBS-1 IS EQUAL TO HIST-VALUE [CNT] GO TO FLT-C. C98970
52050      IF FREQ-HIST-VALUE [CNT] IS EQUAL TO ZERO GO TO FLT-B. C98970
52060      IF CNT IS LESS THAN 1000 GO TO FLT-A. C98970
52070      DISPLAY : MORE THAN 1000 FREQUENCY OCCURENCES : UPON CONSOLE. C98970
52080      GO TO CF1. C98970
52090 FLT-B. C98970
52100      MOVE OBS-1 TO HIST-VALUE [CNT]. C98970
52110      IF CNT IS GREATER THAN KNT THEN MOVE CNT TO KNT. C98970
52120 FLT-C. C98970
52130      ADD 1 TO FREQ-HIST-VALUE [CNT]. C98970
52140      GO TO READ1. C98970
52200 CLOSE-FILES. C98970
52205      PERFORM SET- HISTOG THRU END-SH. C98970
52207 CF1. C98970
52210      CLOSE IN-FIL, HIST-FILE. C98970
52211      IF HIST-FLAG IS EQUAL TO III DISPLAY I HIST ERROR I UPON C98970
52212      CONSOLE. C98970
52215      DISPLAY : NO OF HISTOGRAMS > I NO-OF-HISTS UPON CONSOLE. C98970
52220      DISPLAY : EO C9897 : UPON CONSOLE. C98970
52230      GORACK. C98970
95000 COMPUTE-MEAN-VAR-ANCE. C98970
95010      MOVE ZERO TO CNT. C98970
95020      MOVE ZERO TO MEAN. C98970
95030 CMV-1. C98970
95040      ADD 1 TO CNT. C98970
95050      COMPUTE TEMP-COMP > HIST-VALUE [CNT] * FREQ-HIST-VALUE [CNT]. C98970
95060      ADD TEMP-COMP TO MEAN. C98970
95070      IF CNT IS LESS THAN KNT GO TO CMV-1. C98970
95080      DIVIDE HIST-NO-OF-OBS INTO MEAN. C98970
95090      MOVE ZERO TO CNT. C98970
95100      MOVE ZERO TO VARIANCE. C98970
95105      IF HIST-NO-OF-OBS IS LESS THAN 2 GO TO END-CMV. C98970
95110 CMV-2. C98970
95120      ADD 1 TO CNT. C98970
95130      COMPUTE TEMP-COMP > [(HIST-VALUE [CNT] - MEAN) ** 2] * C98970
95140      FREQ-HIST-VALUE [CNT]. C98970
95150      ADD TEMP-COMP TO VARIANCE. C98970
95160      IF CNT IS LESS THAN KNT GO TO CMV-2. C98970
95170      COMPUTE VARIANCE > VARIANCE / [HIST-NO-OF-OBS - 1]. C98970
95180      MOVE MEAN TO MEAN-RPT. C98970
95190      MOVE VARIANCE TO VARIANCE-RPT. C98970
95200      WRITE HIST-RPT FROM MEAN-VARIANCE-LINE. C98970
95290 END-CMV. EX.T. C98970
97000 WRITE-HISTOGRAM. C98970
97080      MOVE :0: TO HIST-FLAG. C98970
97090      MOVE ZERO TO HIST-OUT-RANGE-VALUE. C98970
97100      MOVE ZERO TO HIST-PAGE-NO. C98970
97140      MOVE -9999.9 TO HIST-VALUE-MAX. C98970
97150      MOVE 9999.9 TO HIST-VALUE-MIN. C98970
97200      MOVE ZERO TO HIST-INDEX. C98970
97210 HIST-FIND-VMAX-VMIN. C98970
97220      ADD 1 TO HIST-INDEX. C98970
97230      MOVE HIST-VALUE [HIST-INDEX] TO HIST-TEMP. C98970
97240      IF HIST-TEMP IS GREATER THAN HIST-VALUE-MAX THEN MOVE C98970
97250      HIST-TEMP TO HIST-VALUE-MAX. C98970
97260      IF HIST-TEMP IS LESS THAN HIST-VALUE-MIN THEN MOVE C98970
97270      HIST-TEMP TO HIST-VALUE-MIN. C98970
97280      IF HIST-INDEX IS LESS THAN KNT THEN GO TO C98970
97290      HIST-FIND-VMAX-VMIN. C98970
97292      IF DATA-TYPE IS EQUAL TO ONE COMPUTE HIST-NO-OF-INTERVALS > C98970
97294      HIST-VALUE-MAX / 4. C98970
97296      IF DATA-TYPE IS EQUAL TO TWO COMPUTE HIST-NO-OF-INTERVALS > C98970
97298      HIST-VALUE-MAX / 8 < 4. C98970
97300 HIST-PRINT-TITLE. C98970
97301      IF HIST-NO-OF-INTERVALS IS LESS THAN 50 MOVE 50 TO C98970
97302      HIST-NO-OF-INTERVALS. C98970
97304      ADD 1 TO HIST-PAGE-NO. C98970
97306      MOVE 5 TO HIST-LINE-CNT. C98970
97310      WRITE HIST-RPT FROM HIST-NEW-PAGE. C98970
97320      MOVE HIST-NO-OF-OBS TO HIST-NO-OF-OBS-RPT. C98970
97330      MOVE HIST-VALUE-MAX TO HIST-VALUE-MAX-RPT. C98970
97340      MOVE HIST-VALUE-MIN TO HIST-VALUE-MIN-RPT. C98970
97350      WRITE HIST-RPT FROM HIST-TITLE. C98970
97355      PERFORM COMPUTE-MEAN-VARIANCE THRU END-CMV. C98970

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97360      WRITE HIST-REC FROM HIST-DOT-LINE.          C98970
97370      WRITE HIST-REC FROM HIST-LABEL.            C98970
97380      WRITE HIST-REC FROM HIST-DOT-LINE.          C98970
97390      HIST-DUMMY.                                  C98970
97410      IF HIST-VALUE-MAX IS LESS THAN HIST-VALUE-MIN THEN GO TO C98970
97420          HIST-ERROR-2.                             C98970
97430      IF HIST-NO-OF-INTERVALS IS GREATER THAN 200 THEN MOVE 200 C98970
97440          TO HIST-NO-OF-INTERVALS.                  C98970
97441      MOVE ZERO TO HIST-INDEX.                     C98970
97442      HIST-RST.                                      C98970
97443      ADD 1 TO HIST-INDEX.                           C98970
97444      MOVE ZERO TO HIST-TABLE [HIST-INDEX].         C98970
97445      IF HIST-INDEX IS LESS THAN HIST-NO-OF-INTERVALS C98970
97446          THEN GO TO HIST-RST.                      C98970
97450      IF DATA-TYPE IS EQUAL TO ONE MOVE 1.0 TO HIST-INTERVAL-SIZE, C98970
97460          ELSE MOVE 8.0 TO HIST-INTERVAL-SIZE.      C98970
97500      NOTE COMPUTE UPPER LIMIT FOR EACH INTERVAL.  C98970
97510      MOVE ZERO TO HIST-INDEX.                     C98970
97520      MOVE ZERO TO HIST-TEMP.                      C98970
97530      HIST-INC-INTERVAL.                            C98970
97540      ADD 1 TO HIST-INDEX.                           C98970
97550      ADD HIST-INTERVAL-SIZE TO HIST-TEMP.          C98970
97560      MOVE HIST-TEMP TO HIST-UPPER-LIMIT [HIST-INDEX]. C98970
97570      IF HIST-INDEX IS LESS THAN HIST-NO-OF-INTERVALS THEN C98970
97580          GO TO HIST-INC-INTERVAL.                  C98970
97600      NOTE PLACE OCCURANCE INTO APPROPRIATE CHANNEL. C98970
97610      MOVE ZERO TO HIST-INDEX-2.                  C98970
97620      HIST-OCCURANCE.                               C98970
97630      ADD 1 TO HIST-INDEX-2.                       C98970
97640      MOVE HIST-VALUE [HIST-INDEX-2] TO HIST-TEMP.  C98970
97650      MOVE ZERO TO HIST-INDEX.                     C98970
97660      HIST-INTERVAL.                                C98970
97670      ADD 1 TO HIST-INDEX.                           C98970
97675      MOVE HIST-HIST-VALUE [HIST-INDEX-2] TO A.     C98970
97680      IF HIST-TEMP IS NOT GREATER THAN HIST-UPPER-LIMIT C98970
97690          [HIST-INDEX] THEN GO TO HIST-ADD-TABLE.   C98970
97700      IF HIST-INDEX IS LESS THAN HIST-NO-OF-INTERVALS THEN GO TO C98970
97710          HIST-INTERVAL.                            C98970
97720      ADD A TO HIST-OUT-RANGE-VALUE.                C98970
97730      GO TO HIST-NO-ADD.                            C98970
97740      HIST-ADD-TABLE.                               C98970
97750      ADD A TO HIST-TABLE [HIST-INDEX].            C98970
97760      HIST-ADD-TABLE.                               C98970
97770      IF HIST-INDEX < 10 THEN RPT                   C98970
97780      NOTE COMPUTE SCALE VALUE.                     C98970
97810      MOVE HIST-TABLE [1] TO HIST-TEMP.           C98970
97820      MOVE 1 TO HIST-INDEX.                        C98970
97830      HIST-SCALE.                                   C98970
97840      ADD 1 TO HIST-INDEX.                           C98970
97850      IF HIST-TABLE [HIST-INDEX] IS GREATER THAN HIST-TEMP THEN C98970
97860          MOVE HIST-TABLE [HIST-INDEX] TO HIST-TEMP. C98970
97870      IF HIST-INDEX IS LESS THAN HIST-NO-OF-INTERVALS THEN GO TO C98970
97880          HIST-SCALE.                                C98970
97890      COMPUTE HIST-SCALE-VALUE > [HIST-TEMP < 99] / 100. C98970
97895      IF HIST-SCALE-VALUE IS LESS THAN 1 MOVE 1 TO C98970
97896          HIST-SCALE-VALUE.                         C98970
97900      MOVE ZERO TO HIST-INDEX.                     C98970
97910      HIST-SCALED-VALUES.                          C98970
97920      ADD 1 TO HIST-INDEX.                           C98970
97930      COMPUTE HIST-TABLE-SCALED [HIST-INDEX] > C98970
97940          HIST-TABLE [HIST-INDEX] / HIST-SCALE-VALUE. C98970
97950      IF HIST-INDEX IS LESS THAN HIST-NO-OF-INTERVALS THEN GO TO C98970
97960          HIST-SCALED-VALUES.                      C98970
98000      NOTE PREPARE OUTPUT DATA.                   C98970
98010      DIVIDE < INTO HIST-INTERVAL-SIZE.           C98970
98020      MOVE ZERO TO HIST-CUM.                      C98970
98030      MOVE ZERO TO HIST-LINE.                     C98970
98040      HIST-PREPARE.                                 C98970
98050      ADD 1 TO HIST-LINE.                           C98970
98060      MOVE HIST-LINE TO HIST-LINE-RPT.             C98970
98070      COMPUTE HIST-TEMP > HIST-UPPER-LIMIT [HIST-LINE] C98970
98080          - HIST-INTERVAL-SIZE.                     C98970
98090      MOVE HIST-TEMP TO HIST-MID-POINT-RPT.         C98970
98100      COMPUTE HIST-PERCENT > HIST-TABLE [HIST-LINE] * 100 C98970
98110          / HIST-NO-OF-OBS.                        C98970
98120      MOVE HIST-PERCENT TO HIST-PERCENT-RPT.        C98970
98130      ADD HIST-PERCENT TO HIST-CUM.                 C98970
98140      MOVE HIST-CUM TO HIST-CUM-RPT.               C98970
98150      MOVE HIST-TABLE [HIST-LINE] TO HIST-FREQ-RPT. C98970
98160      MOVE ZERO TO HIST-INDEX.                     C98970
98170      IF HIST-DIST IS NOT EQUAL TO 0: GO TO HIST-CUM-1. C98970
98180      COMPUTE HIST-INDEX-2 > HIST-TABLE-SCALED [HIST-LINE] < 0.5. C98970
98190      IF HIST-INDEX-2 IS EQUAL TO ZERO GO TO HIST-PREP-SPACE. C98970
98200      HIST-PREP-DIST.                                C98970
98210      ADD 1 TO HIST-INDEX.                           C98970
98220      MOVE 0: TO HIST-POINT [HIST-INDEX].          C98970
98230      IF HIST-INDEX IS LESS THAN HIST-INDEX-2 GO TO HIST-PREP-DIST. C98970

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98240 IF HIST-INDEX IS EQUAL TO 100 THEN GO TO HIST-WRITE. C98970
98250 HIST-PPRP-SPACE. C98970
98260 ADD 1 TO HIST-INDEX. C98970
98270 MOVE SPACE TO HIST-POINT [HIST-INDEX]. C98970
98280 IF HIST-INDEX IS LESS THAN 100 THEN GO TO HIST-PPRP-SPACE. C98970
98290 GO TO HIST-WRITE. C98970
98300 HIST-CUM-1. C98970
98310 ADD 1 TO HIST-INDEX. C98970
98320 MOVE SPACE TO HIST-POINT [HIST-INDEX]. C98970
98330 IF HIST-INDEX IS LESS THAN 100 THEN GO TO HIST-CUM-1. C98970
98338 COMPUTE HIST-INDEX > HIST-CUM < 0.5. C98970
98339 IF HIST-INDEX IS EQUAL TO ZERO GO TO HIST-WRITE. C98970
98340 MOVE :0: TO HIST-POINT [HIST-INDEX]. C98970
98400 HIST-WRITE. C98970
98410 WRITE HIST-RFC FROM HIST-LINE-OUT. C98970
98412 ADD 1 TO HIST-LINE-CNT. C98970
98414 IF HIST-PAGE-FLAG IS EQUAL TO ZERO GO TO HIST-NO-PAGING. C98970
98415 IF HIST-LINE-CNT IS EQUAL TO HIST-PAGE-FLAG C98970
98416 THEN PERFORM HIST-PRINT-TITLE. C98970
98417 HIST-NO-PAGING. C98970
98420 IF HIST-LINE IS LESS THAN HIST-NO-OF-INTERVALS THEN GO TO C98970
98430 HIST-PREPARE. C98970
98440 WRITE HIST-REC FROM HIST-DOT-LINE. C98970
98450 MOVE HIST-SCALE-VALUE TO HIST-SCALE-RPT. C98970
98460 WRITE HIST-HFC FROM HIST-SCALE-LINE. C98970
98470 IF HIST-OUT-RANGE-VALUE IS EQUAL TO ZERO GO TO HIST-WRITE-B. C98970
98480 MOVE HIST-OUT-RANGE-VALUE TO HIST-OUT-RANGE-RPT. C98970
98490 WRITE HIST-RFC FROM HIST-OUT-RANGE-REC. C98970
98500 HIST-WRITE-B. C98970
98510 WRITE HIST-HFC FROM HIST-DOT-LINE. C98970
98520 GO TO END-HIST. C98970
99000 HIST-ERROR-1. C98970
99010 WRITE HIST-HFC FROM HIST-TITLE. C98970
99020 MOVE HIST-ERR-1 TO HIST-TITLE-1. C98970
99030 MOVE HIST-NO-OF-085 TO HIST-ERR-2. C98970
99040 WRITE HIST-HFC FROM HIST-TITLE. C98970
99050 MOVE :1: TO HIST-FLAG. C98970
99060 GO TO END-HIST. C98970
99100 HIST-ERROR-2. C98970
99110 MOVE HIST-ERR-4 TO HIST-TITLE-1. C98970
99120 MOVE HIST-ERR-5 TO HIST-TITLE-2. C98970
99130 WRITE HIST-HFC FROM HIST-TITLE. C98970
99140 MOVE :1: TO HIST-FLAG. C98970
99150 GO TO END-HIST. C98970
99200 HIST-ERR-3. C98970
99210 MOVE :1: TO HIST-FLAG. C98970
99990 END-HIST. EXIT. C98970
/* PLACE COBOL SOURCE BEFORE C98970
//CHG,TFGIN DU *,SPACE>[CYL,[1,1]] 1440 CDS
TFG DT03 11 020208U
5 0
*END
/* PLACE TFG DATA BEFORE THIS CARD
//TPR,TU12 DU DISP>[OLD,KEEP],VOL>SER>+F1,UNIT>T+F1 T12
//TPR,TU25 DU DISP>[OLD,KEEP],VOL>SER>+F8,UNIT>T+F8 T25
//TPR,TPRIN DU *,SPACE>[TRK,[1,1]]
T/P TU25 1998130800U
/* PLACE T/P CONTROL CARDS BEFORE THIS CARD

```

#### 6.9.4 SORT FOR REPAIR ACTION INTERVALS

```

//T9897J JOB 01: G WANG :PRTY>02, TYPRUN>HOLD
//C9897F EXEC P9622N,W.06U,TIME>05,ACCT>035323007
//CHG.SORTIN DD DISP>[KEEP],UNIT>[A+F5,2,DEFER], JCS
// CSN>+E,9897429, CT22/23 1
// VOL>SER>L+F5,A+F5,B+F5,C+F5,D+F5,E+F5,F+F5,G+F5,H+F5, CT22 2
// I+F5,J+F5,K+F5,L+F5,M+F5,N+F5,O+F5,P+F5,Q+F5,R+F5,S+F5, CT22 3
// DCB>[LRECL>0020,BLKSIZE>1800],LABEL>[NSL,RETPD>099] CT22 4
//CHG.SORTOUT DD DISP>[KEEP],UNIT>[A+F1,2,DEFER],DSN>+A.9897430, CT12/13 1
// VOL>SER>L+F1,A+F1,B+F1,C+F1,D+F1,E+F1,F+F1,G+F1,H+F1, CT12 2
// I+F1,J+F1,K+F1,L+F1,M+F1,N+F1,O+F1,P+F1,Q+F1,R+F1,S+F1, CT12 3
// DCB>[LRECL>0020,BLKSIZE>1800]
//CHG.SYSIN DD *,DCB>BLKSIZE>0080,SPACE>[TRK,[1,1]]
SORT FIELDS>[017,001,[4,A,019,001,CH,A,001,005,CH,A,006,003,CH,A], C
SIZE>E0300000
MODS E15>[E15,008,SORTLIB,N],E18>[E18,024,SORTLIB,N]
/*

```

## 6.9.5 CUMULATIVE DISTRIBUTION FOR REPAIR ACTION INTERVALS

```
//C9897C EXEC P9H5SL,TIME>10,ACCT>D35323007
//CHG,TU12 DD DIS>[X,PASS],UNIT>[A+F1,2,DEFER],DSN>A.9897430, CT12/13 1
// VOL>SER>+F1,A+F1,B+F1,C+F1,D+F1,E+F1,F+F1,G+F1,H+F1, CT12 2
// I+F1,J+F1,K+F1,L+F1,M+F1,N+F1,O+F1,P+F1,Q+F1,R+F1,S+F1 T12 3
//CHG,TU25 DD DIS>[X,PASS],UNIT>[T+F8,1,DEFER],DSN>H.9897431, CT25 1
// VOL>SER>+F8,A+F8,B+F8,C+F8,D+F8,E+F8,F+F8,G+F8,H+F8, CT25 2
// I+F8,J+F8,K+F8,L+F8,M+F8,N+F8,O+F8,P+F8,Q+F8,R+F8,S+F8 T25 3
//CHG,INPUT DD *,SPACE>[CYL,[1,1]] 1440 CDS
00000 COMBINE COMPILE G. WANG. C98970
01040 DATE-WRITTEN: 7 APR 72. C98970
01050 REMARKS. C98970
01060 MAINTENANCE STUDY PROGRAM 3C. C98970
01070 REPAIR ACTION INTERVALS. C98970
01080 PREPARES CUMULATIVE DISTRIBUTION OF REPAIR ACTION C98970
01090 INTERVALS. C98970
01100 INPUT SORT SEQUENCE C98970
01110 AIRCRAFT SUB-SET, DATA-TYPE, WUC, HMC, C98970
02000 ENVIRONMENT DIVISION, C98970
02010 CONFIGURATION SECTION. C98970
02020 SOURCE-COMPUTER, IBM-360. C98970
02030 OBJECT-COMPUTER, IBM-360. C98970
02100 INPUT-OUTPUT SECTION. C98970
02110 FILE-CONTROL. C98970
02120 SELECT IN-FILE ASSIGN TO UT-S-TU12 C98970
02130 RESERVE 1 ALTERNATE AREA. C98970
02140 SELECT HIST-FILE ASSIGN TO UT-S-TU25 C98970
02150 RESERVE 1 ALTERNATE AREA. C98970
09000 SELECT CUT-OFF-FILE ASSIGN TO DA-S-DT03 C98970
09010 RESERVE 1 ALTERNATE AREA. C98970
10000 DATA DIVISION. C98970
10010 FILE SECTION. C98970
11100 FD IN-FILE C98970
11120 RECORDING MODE IS F C98970
11130 BLOCK CONTAINS 90 RECORDS C98970
11140 RECORD CONTAINS 20 CHARACTERS C98970
11150 LABEL RECORDS ARE OMITTED C98970
11160 DATA RECORDS ARE IN-REC. C98970
11170 01 IN-REC SYNC. C98970
11180 02 WUC PICTURE X(5). C98970
11181 02 HMC PICTURE X(3). C98970
11182 02 FILLER PICTURE X. C98970
11183 02 OBS PICTURE S9(6). C98970
11184 02 OBS-1 REDEFINES OBS PICTURE S99999V9. C98970
11185 02 FILLER PICTURE X. C98970
11186 02 ISCHRONAL-NEW PICTURE X. C98970
11187 02 FILLER PICTURE X. C98970
11188 02 DATA-TYPE-NEW PICTURE X. C98970
11189 02 FILLER PICTURE X. C98970
12100 FD HIST-FILE C98970
12120 RECORDING MODE IS F C98970
12130 BLOCK CONTAINS 15 RECORDS C98970
12140 RECORD CONTAINS 130 CHARACTERS C98970
12150 LABEL RECORDS ARE OMITTED C98970
12160 DATA RECORDS ARE HIST-REC. C98970
12170 01 HIST-REC SYNC. C98970
12180 02 FILLER PICTURE X(130). C98970
29000 FU CUT-OFF-FILE C98970
29010 RECORDING MODE IS F C98970
29020 BLOCK CONTAINS 20 RECORDS C98970
29030 RECORD CONTAINS 80 CHARACTERS C98970
29040 LABEL RECORDS ARE STANDARD C98970
29050 DATA RECORDS ARE CUT-OFF-REC. C98970
29060 01 CUT-OFF-REC SYNC. C98970
29070 05 NI-CUT-OFF PICTURE 9(5). C98970
29080 05 ISO-CUT-OFF PICTURE 9(5). C98970
29090 05 FILLER PICTURE X(70). C98970
30000 WORKING-STORAGE SECTION. C98970
30010 77 KNT SYNC PICTURE S9(5). C98970
30020 01 FILLER SYNC. C98970
30030 02 FREQ-HIST-VALUE OCCURS 1000 TIMES PICTURE S9(5) C98970
30040 COMPUTATIONAL. C98970
30050 01 A PICTURE S9(5) COMPUTATIONAL. C98970
30060 01 NO-OF-HISTS SYNC PICTURE 9999 VALUE ZERO. C98970
30070 01 TWO SYNC PICTURE X VALUE :2:. C98970
30080 01 ONE SYNC PICTURE X VALUE :1:. C98970
30090 01 CNT SYNC PICTURE S9(5) COMPUTATIONAL. C98970
30100 01 CUR-WUC-T SYNC. C98970
30110 02 FILLER PICTURE X(5) VALUE : WUC>1. C98970
30120 02 CUR-WUC PICTURE X(5). C98970
30130 01 CUR-HMC-T SYNC. C98970
30140 02 FILLER PICTURE X(5) VALUE : HMC>1. C98970
30150 02 CUR-HMC PICTURE X(3). C98970
30160 02 FILLER PICTURE XX VALUE SPACE. C98970
30170 01 ISCHRONAL SYNC PICTURE X. C98970
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30180	01	DATA-TYPE SYNC	PICTURE X.	C98970
30190	01	MINUS-ONE COMPUTATIONAL	PICTURE S999 VALUE -1 SYNC.	C98970
32000	01	REPORT-IO SYNC.		C98970
32010	02	FILLER	PICTURE X(50) VALUE	C98970
32020		:S989/A60 TF7919-02 142-A 1 1/2		C98970
32030	02	FILLER	PICTURE X(50) VALUE SPACE.	C98970
32040	02	FILLER	PICTURE X(30) VALUE	C98970
32050		:	#:.	C98970
46000	01	MEAN COMPUTATIONAL SYNC.	PICTURE S9(7)V99.	C98970
46010	01	VARIANCE COMPUTATIONAL SYNC	PICTURE S9(7)V99.	C98970
46020	01	TEMP-COMP	PICTURE S9(7)V99.	C98970
46100	01	MEAN-VARIANCE-LINE SYNC.		C98970
46110	02	FILLER	PICTURE X(50) VALUE	C98970
46120		:S		C98970
46130	02	FILLER	PICTURE X(19) VALUE	C98970
46140		: MEAN >:.		C98970
46150	02	MEAN-RPT	PICTURE ZZZ9.9.	C98970
46160	02	FILLER	PICTURE X(30) VALUE	C98970
46170		: VARIANCE >:.		C98970
46180	02	VARIANCE-RPT	PICTURE ZZZZZ9.9.	C98970
46190	02	FILLER	PICTURE X(16) VALUE	C98970
46200		:#:		C98970
47000	01	HIST-VALUE-MAX SYNC	PICTURE S999V99 VALUE -9999.9.	C98970
47010	01	HIST-VALUE-MIN SYNC	PICTURE S999V99 VALUE <9999.9.	C98970
47020	01	HIST-NO-OF-OPS SYNC	PICTURE S9(5) VALUE ZERO.	C98970
47030	01	HIST-NO-OF-INTERVALS SYNC	PICTURE 999V99 VALUE 50.	C98970
47040	01	HIST-INPUT-VM:X-VMIN SYNC	PICTURE 9 VALUE ZERO.	C98970
47050	01	HIST-DIST SYNC	PICTURE X VALUE :1:.	C98970
47060	01	HIST-INDEX SYNC COMPUTATIONAL	PICTURE S999 VALUE ZERO.	C98970
47070				C98970
47080	01	HIST-INDEX-2 SYNC COMPUTATIONAL	PICTURE S999 VALUE ZERO.	C98970
47090				C98970
47100	01	HIST-TEMP SYNC	PICTURE S999V99 VALUE ZERO.	C98970
47110	01	HIST-INTERVAL-SIZE SYNC	PICTURE S999V99 VALUE ZERO	C98970
47120		COMPUTATIONAL.		C98970
47150	01	HIST-FLAG SYNC	PICTURE X VALUE :0:.	C98970
47160	01	HIST-SCALE-VALUE SYNC COMPUTATIONAL	PICTURE S999 VALUE <1.	C98970
47170				C98970
47180	01	HIST-PERCENT SYNC	PICTURE S999V99 COMPUTATIONAL.	C98970
47190	01	HIST-LUM SYNC	PICTURE S999V99 COMPUTATIONAL.	C98970
47200	01	HIST-LINE SYNC COMPUTATIONAL		C98970
47210			PICTURE S999 VALUE ZERO.	C98970
47220	01	HIST-PAGE-FLAG SYNC	PICTURE S999 VALUE <75.	C98970
47230	01	HIST-LINE-CNT SYNC	PICTURE S999.	C98970
47300	01	HIST-ERR-1 SYNC	PICTURE X(10) VALUE	C98970
47310		:ERROR NO 0:.		C98970
47320	01	HIST-ERR-3 SYNC.		C98970
47330	02	FILLER	PICTURE X(5) VALUE :BS >:.	C98970
47340	02	HIST-ERR-2	PICTURE S9(5) VALUE ZERO.	C98970
47350	01	HIST-ERR-4 SYNC	PICTURE X(10) VALUE	C98970
47360		:ERROR MAX:.		C98970
47370	01	HIST-ERR-5 SYNC	PICTURE X(10) VALUE	C98970
47380		:MIN BAD. :.		C98970
47390	01	HIST-OUT-RANGE-VALUE SYNC	PICTURE S999 COMPUTATIONAL.	C98970
47400	01	FILLER SYNC.		C98970
47510	02	FILLER OCCURS 200 TIMES.		C98970
47530	03	HIST-TABLE	PICTURE S9(5) COMPUTATIONAL.	C98970
47540	03	HIST UPPER-LIMIT	PICTURE S999V99 COMPUTATIONAL.	C98970
47550	03	HIST-TABLE-SCALED	PICTURE S999V99 COMPUTATIONAL.	C98970
47560	01	HIST-NUM-PAGE SYNC.		C98970
47570	02	FILLER	PICTURE X VALUE :1:.	C98970
47580	02	FILLER	PICTURE X(122) VALUE SPACE.	C98970
47582	02	FILLER	PICTURE X(5) VALUE :PAGE:.	C98970
47584	02	HIST-PAGE-NO	PICTURE 9.	C98970
47590	02	FILLER	PICTURE X VALUE :1:.	C98970
47600	01	HIST-TITLE SYNC.		C98970
47610	02	FILLER	PICTURE X(3) VALUE :S:.	C98970
47620	02	HIST-TITLE-1.		C98970
47621	03	FILLER	PICTURE X(10) VALUE SPACE.	C98970
47630	02	HIST-TITLE-2.		C98970
47631	03	FILLER	PICTURE X(10) VALUE SPACE.	C98970
47640	02	HIST-TITLE-3	PICTURE X(10) VALUE SPACE.	C98970
47650	02	HIST-TITLE-4	PICTURE X(10) VALUE SPACE.	C98970
47660	02	FILLER	PICTURE X(24) VALUE	C98970
47670		: NO OF OBSERVATIONS >:.		C98970
47680	02	HIST-NO-F-OBS-RPT	PICTURE ZZZ29.	C98970
47690	02	FILLER	PICTURE X(13) VALUE	C98970
47700		: VALUE MAX >:.		C98970
47710	02	HIST-VALUE-MAX-RPT	PICTURE ----.9.	C98970
47720	02	FILLER	PICTURE X(13) VALUE	C98970
47730		: VALUE MIN >:.		C98970
47740	02	HIST-VALUE-MIN-RPT	PICTURE ----.9.	C98970
47750	02	FILLER	PICTURE X(18) VALUE	C98970
47760		:#:		C98970
47900	01	HIST-UNIT-LINE SYNC.		C98970
47910	02	FILLER	PICTURE X(50) VALUE	C98970
47920		:/-----1.		C98970

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47922      02 FILLER                PICTURE X(80) VALUE          C98970
47930      :-----:                C98970
47940      :-----:                C98970
47950      01 HIST-LABEL SYNC.      C98970
47960      02 FILLER                PICTURE X(50) VALUE          C98970
47970      :// MIDPNT PCNT CUM FREQ 1...5...10...15...20... C98970
47974      02 FILLER                PICTURE X(80) VALUE          C98970
47980      :25...30...35...40...45...50...55...60...65...70...75...80... C98970
47990      :85...90...95...100... C98970
48000      01 HIST-LINE-OUT SYNC.    C98970
48010      02 FILLER                PICTURE X VALUE ://.        C98970
48020      02 HIST-LINE-RPT          PICTURE ZZ9.                C98970
48030      02 FILLER                PICTURE X VALUE SPACE.       C98970
48040      02 HIST-MID-POINT-RPT     PICTURE ---.9.              C98970
48060      02 HIST-PERCENT-RPT       PICTURE ZZ9.9.              C98970
48070      02 FILLER                PICTURE X VALUE SPACE.       C98970
48080      02 HIST-CUM-RPT           PICTURE ZZ9.9.              C98970
48100      02 HIST-FREQ-RPT          PICTURE ZZZZ9.              C98970
48110      02 FILLER                PICTURE X VALUE SPACE.       C98970
48120      02 HIST-POINT OCCURS 100 TIMES C98970
48130      PICTURE X.                C98970
48140      02 FILLER                PICTURE X VALUE :#.          C98970
48150      01 HIST-OUT-RANGE-REC SYNC. C98970
48160      02 FILLER                PICTURE X(35) VALUE          C98970
48170      :// NUMBER OF OUT OF RANGE VALUES >#. C98970
48180      02 HIST-OUT-RANGE-RPT     PICTURE ZZ9.                C98970
48190      02 FILLER                PICTURE X(91) VALUE SPACE.   C98970
48191      02 FILLER                PICTURE X VALUE :#.          C98970
48200      01 HIST-SCALE-LINE SYNC.  C98970
48210      02 FILLER                PICTURE X(27) VALUE          C98970
48220      :// SCALING FACTOR >#. C98970
48230      02 HIST-SCALE-RPT         PICTURE ZZ9.                C98970
48240      02 FILLER                PICTURE X(99) VALUE SPACE.   C98970
48250      02 FILLER                PICTURE X VALUE :#.          C98970
48300      01 FILLER SYNC.           C98970
48310      02 HIST-VALUE OCCURS 1000 TIMES C98970
48320      PICTURE S9999V9 COMPUTATIONAL. C98970
50000      PROCEDURE DIVISION.      C98970
50001      OPEN INPUT CUT-OFF-FILE. C98970
50002      HEAD CUT-OFF-FILE AT END GO TO CLOSE-FILES. C98970
50003      CLOSE CUT-OFF-FILE WITH LOCK. C98970
50010      OPEN INPUT IN-FILE.       C98970
50020      OPEN OUTPUT HIST-FILE.    C98970
50030      MOVE 1000 TO CNT.         C98970
50040      PERFORM RESET-TABLE THRU END-RST-TABLE. C98970
50050      READ IN-FILE. AT END GO TO CLOSE-FILES. C98970
50060      WRITE HIST-REC FROM REPORT-ID. C98970
50100      PARA-1.                   C98970
50110      MOVE 1 TO HIST-NO-OF-OBS. C98970
50120      MOVE WUC TO CUR-WUC.       C98970
50130      MOVE HMC TO CUR-HMC.       C98970
50140      MOVE DATA-TYPE-NEW TO DATA-TYPE. C98970
50150      MOVE ISCHRONAL-NEW TO ISCHRONAL. C98970
50160      IF DATA-TYPE IS EQUAL TO ONE GO TO WEEKS-DATA ELSE GO TO C98970
50170      FLT-DATA.                  C98970
50200      READ1.                     C98970
50210      READ IN-FILE. AT END GO TO CLOSE-FILES. C98970
50220      IF DATA-TYPE-NEW IS EQUAL TO 19: GO TO CLOSE-FILES. C98970
50230      IF WUC IS NOT EQUAL TO CUR-WUC GO TO PARA-2. C98970
50240      IF HMC IS NOT EQUAL TO CUR-HMC GO TO PARA-2. C98970
50250      ADD 1 TO HIST-NO-OF-OBS.   C98970
50260      IF DATA-TYPE IS EQUAL TO ONE GO TO WEEKS-DATA ELSE GO TO C98970
50270      FLT-DATA.                  C98970
50300      PARA-2.                     C98970
50310      PERFORM SET-HISTOG THRU END-SH. C98970
50320      PERFORM RESET-TABLE THRU END-RST-TABLE. C98970
50330      GO TO PARA-1.              C98970
50400      RESET-TABLE.               C98970
50410      MOVE ZERO TO CNT.          C98970
50420      RST.                       C98970
50430      ADD 1 TO CNT.               C98970
50440      MOVE MINUS-ONE TO HIST-VALUE (CNT). C98970
50445      MOVE ZERO TO HIST-HIST-VALUE (CNT). C98970
50450      IF CNT IS LESS THAN KNT GO TO RST. C98970
50455      MOVE ZERO TO KNT.          C98970
50460      END-RST-TABLE. EXIT.        C98970
50510      SET-HISTOG.                C98970
50512      IF ISCHRONAL IS EQUAL TO ONE AND HIST-NO-OF-OBS IS NOT C98970
50514      GREATER THAN ISO-CUT-OFF GO TO END-SH. C98970
50516      IF ISCHRONAL IS EQUAL TO TWO AND HIST-NO-OF-OBS IS NOT C98970
50518      GREATER THAN NI-CUT-OFF GO TO END-SH. C98970
50520      IF ISCHRONAL IS EQUAL TO ONE MOVE : ISO : TO C98970
50530      HIST-TITLE-4, ELSE MOVE : NON-ISO : TO HIST-TITLE-4. C98970
50540      IF DATA-TYPE IS EQUAL TO ONE MOVE : WEEKS : TO C98970
50550      HIST-TITLE-3, ELSE MOVE : FLT-HOURS: TO HIST-TITLE-3. C98970
50560      MOVE CUR-WUC-T TO HIST-TITLE-1. C98970
50570      MOVE CUR-HMC-T TO HIST-TITLE-2. C98970

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50590	PERFORM WHITE HISTOGRAM THRU END-HIST.	C98970
50600	IF HIST-FLAG IS EQUAL TO 111 THEN GO TO CF1.	C98970
50610	ADD 1 TO NO-OF-HISTS.	C98970
50620	END-SH. EXIT.	C98970
51000	WEEKS-DATA.	C98970
51010	MOVL ZERO TO CNT.	C98970
51020	WEEK-A.	C98970
51030	ADD 1 TO CNT.	C98970
51040	IF OBS IS EQUAL TO HIST-VALUE [CNT] GO TO WEEK-C.	C98970
51050	IF FREQ-HIST-VALUE [CNT] IS EQUAL TO ZERO GO TO WEEK-B.	C98970
51060	IF CNT IS LESS THAN 1000 GO TO WEEK-A.	C98970
51070	DISPLAY : MORE THAN 1000 FREQUENCY OCCURENCES : UPON CONSOLE.	C98970
51080	GO TO CF1.	C98970
51090	WEEK-B.	C98970
51100	MOVE OBS TO HIST-VALUE [CNT].	C98970
51110	IF CNT IS GREATER THAN KNT THEN MOVE CNT TO KNT.	C98970
51120	WEEK-C.	C98970
51130	ADD 1 TO FREQ-HIST-VALUE [CNT].	C98970
51140	GO TO READ1.	C98970
52000	FLT-DATA.	C98970
52010	MOVL ZERO TO CNT.	C98970
52020	FLT-A.	C98970
52030	ADD 1 TO CNT.	C98970
52040	IF OBS-1 IS EQUAL TO HIST-VALUE [CNT] GO TO FLT-C.	C98970
52050	IF FREQ-HIST-VALUE [CNT] IS EQUAL TO ZERO GO TO FLT-B.	C98970
52060	IF CNT IS LESS THAN 1000 GO TO FLT-A.	C98970
52070	DISPLAY : MORE THAN 1000 FREQUENCY OCCURENCES : UPON CONSOLE.	C98970
52080	GO TO CF1.	C98970
52090	FLT-B.	C98970
52100	MOVE OBS-1 TO HIST-VALUE [CNT].	C98970
52110	IF CNT IS GREATER THAN KNT THEN MOVE CNT TO KNT.	C98970
52120	FLT-C.	C98970
52130	ADD 1 TO FREQ-HIST-VALUE [CNT].	C98970
52140	GO TO READ1.	C98970
52200	CLOSE-FILES.	C98970
52205	PERFORM SET-HISTOG THRU END-SH.	C98970
52207	CF1.	C98970
52210	CLOSE IN-FILE HIST-FILE.	C98970
52211	IF HIST-FLAG IS EQUAL TO 11: DISPLAY : HIST ERROR : UPON	C98970
52212	CONSOLE.	C98970
52215	DISPLAY : NO OF HISTOGRAMS > : NO-OF-HISTS UPON CONSOLE.	C98970
52220	DISPLAY : E0J C9897P : UPON CONSOLE.	C98970
52230	GORACK.	C98970
95000	COMPUTE-MEAN-VARIANCE.	C98970
95010	MOVL ZERO TO CNT.	C98970
95020	MOVL ZERO TO MEAN.	C98970
95030	CMV-1.	C98970
95040	ADD 1 TO CNT.	C98970
95050	COMPUTE TEMP-COMP > HIST-VALUE [CNT] * FREQ-HIST-VALUE [CNT].	C98970
95060	ADD TEMP-COMP TO MEAN.	C98970
95070	IF CNT IS LESS THAN KNT GO TO CMV-1.	C98970
95080	DIVIDE HIST-NO-OF-OBS INTO MEAN.	C98970
95090	MOVL ZERO TO NT.	C98970
95100	MOVL ZERO TO VARIANCE.	C98970
95105	IF HIST-NO-OF-OBS IS LESS THAN 2 GO TO END-CMV.	C98970
95110	CMV-2.	C98970
95120	ADD 1 TO CNT.	C98970
95130	COMPUTE TEMP-COMP > [HIST-VALUE [CNT] - MEAN] ** 2) *	C98970
95140	FREQ-HIST-VALUE [CNT].	C98970
95150	ADD TEMP-COMP TO VARIANCE.	C98970
95160	IF CNT IS LESS THAN KNT GO TO CMV-2.	C98970
95170	COMPUTE VARIANCE > VARIANCE / [HIST-NO-OF-OBS - 1].	C98970
95180	MOVE MEAN TO MEAN-RPT.	C98970
95190	MOVE VARIANCE TO VARIANCE-RPT.	C98970
95200	WRITE HIST-REF FROM MEAN-VARIANCE-LINE.	C98970
95290	END-CMV. EXIT.	C98970
97000	WRITE-HISTOGRAM.	C98970
97080	MOVE 10: TO HIST-FLAG.	C98970
97090	MOVE ZERO TO HIST-OUT-RANGE-VALUE.	C98970
97100	MOVE ZERO TO HIST-PAGE-NO.	C98970
97140	MOVE <999.9 TO HIST-VALUE-MAX.	C98970
97150	MOVE <999.9 TO HIST-VALUE-MIN.	C98970
97200	MOVE ZERO TO HIST-INDEX.	C98970
97210	HIST-FIND-VMAX-VMIN.	C98970
97220	ADD 1 TO HIST-INDEX.	C98970
97230	MOVE HIST-VALUE [HIST-INDEX] TO HIST-TEMP.	C98970
97240	IF HIST-TEMP IS GREATER THAN HIST-VALUE-MAX THEN MOVE	C98970
97250	HIST-TEMP TO HIST-VALUE-MAX.	C98970
97260	IF HIST-TEMP IS LESS THAN HIST-VALUE-MIN THEN MOVE	C98970
97270	HIST-TEMP TO HIST-VALUE-MIN.	C98970
97280	IF HIST-INDEX IS LESS THAN KNT THEN GO TO	C98970
97290	HIST-FIND-VMAX-VMIN.	C98970
97292	IF DATA-TYPE IS EQUAL TO ONE COMPUTE HIST-NO-OF-INTERVALS >	C98970
97294	HIST-VALUE-MAX < 4.	C98970
97296	IF DATA-TYPE IS EQUAL TO TWO COMPUTE HIST-NO-OF-INTERVALS >	C98970
97298	HIST-VALUE-MAX / 8 < 4.	C98970
97300	HIST-PRINT-TITLE.	C98970



97301	IF HIST-NO-OF-INTERVALS IS LESS THAN 50 MOVE 50 TO	C98970
97302	HIST-NO-OF-INTERVALS.	C98970
97304	ADD 1 TO HIST-PAGE-NO.	C98970
97306	MOVL 5 TO HIST-LINE-CNT.	C98970
97310	WRITE HIST-REC FROM HIST-NEW-PAGE.	C98970
97320	MOVE HIST-NO-OF-OBS TO HIST-NO-OF-OBS-RPT.	C98970
97330	MOVE HIST-VALUE-MAX TO HIST-VALUE-MAX-RPT.	C98970
97340	MOVE HIST-VALUE-MIN TO HIST-VALUE-MIN-RPT.	C98970
97350	WRITE HIST-REC FROM HIST-TITLE.	C98970
97355	PERFORM COMPUTE-MEAN-VARIANCE THRU END-CMV.	C98970
97360	WRITE HIST-REC FROM HIST-DOT-LINE.	C98970
97370	WRITE HIST-REC FROM HIST-LABEL.	C98970
97380	WRITE HIST-REC FROM HIST-DOT-LINE.	C98970
97390	HIST-DUMMY.	C98970
97410	IF HIST-VALUE-MAX IS LESS THAN HIST-VALUE-MIN THEN GO TO	C98970
97420	HIST-ERROR-2.	C98970
97430	IF HIST-NO-OF-INTERVALS IS GREATER THAN 200 THEN MOVE 200	C98970
97440	TO HIST-NO-OF-INTERVALS.	C98970
97441	MOVE ZERO TO HIST-INDEX.	C98970
97442	HIST-RST.	C98970
97443	ADD 1 TO HIST-INDEX.	C98970
97444	MOVL ZERO TO HIST-TABLE [HIST-INDEX].	C98970
97445	IF HIST-INDEX IS LESS THAN HIST-NO-OF-INTERVALS	C98970
97446	THEN GO TO HIST-RST.	C98970
97450	IF DATA-TYPE IS EQUAL TO ONE MOVE 1.0 TO HIST-INTERVAL-SIZE,	C98970
97460	ELSE MOVE 8.0 TO HIST-INTERVAL-SIZE.	C98970
97500	NOTE COMPUTE UPPER LIMIT FOR EACH INTERVAL.	C98970
97510	MOVE ZERO TO HIST-INDEX.	C98970
97520	MOVE ZERO TO HIST-TEMP.	C98970
97530	HIST-INC-INTERVAL.	C98970
97540	ADD 1 TO HIST-INDEX.	C98970
97550	ADD HIST-INTERVAL-SIZE TO HIST-TEMP.	C98970
97560	MOVL HIST-TEMP TO HIST-UPPER-LIMIT [HIST-INDEX].	C98970
97570	IF HIST-INDEX IS LESS THAN HIST-NO-OF-INTERVALS THEN	C98970
97580	GO TO HIST-INC-INTERVAL.	C98970
97600	NOTE PLACE OCCURANCE INTO APPROPRIATE CHANNEL.	C98970
97610	MOVE ZERO TO HIST-INDEX-2.	C98970
97620	HIST-OCCURANCE.	C98970
97630	ADD 1 TO HIST-INDEX-2.	C98970
97640	MOVL HIST-VALUE [HIST-INDEX-2] TO HIST-TEMP.	C98970
97650	MOVE ZERO TO HIST-INDEX.	C98970
97660	HIST-INTERVAL.	C98970
97670	ADD 1 TO HIST-INDEX.	C98970
97675	MOVE HIST-VALUE [HIST-INDEX-2] TO A.	C98970
97680	IF HIST-TEMP IS NOT GREATER THAN HIST-UPPER-LIMIT	C98970
97690	[HIST-INDEX] THEN GO TO HIST-ADD-TABLE.	C98970
97700	IF HIST-INDEX IS LESS THAN HIST-NO-OF-INTERVALS THEN GO TO	C98970
97710	HIST-INTERVAL.	C98970
97720	ADD A TO HIST-OUT-RANGE-VALUE.	C98970
97730	GO TO HIST-NO-ADD.	C98970
97740	HIST-ADD-TABLE.	C98970
97750	ADD A TO HIST-TABLE [HIST-INDEX].	C98970
97751	HIST-NO-ADD.	C98970
97760	IF HIST-INDEX-2 IS LESS KNT GO TO HIST-OCCURANCE.	C98970
97800	NOTE COMPUTE SCALE VALUE.	C98970
97810	MOVE HIST-TABLE [1] TO HIST-TEMP.	C98970
97820	MOVE 1 TO HIST-INDEX.	C98970
97830	HIST-SCALE.	C98970
97840	ADD 1 TO HIST-INDEX.	C98970
97850	IF HIST-TABLE [HIST-INDEX] IS GREATER THAN HIST-TEMP THEN	C98970
97860	MOVE HIST-TABLE [HIST-INDEX] TO HIST-TEMP.	C98970
97870	IF HIST-INDEX IS LESS THAN HIST-NO-OF-INTERVALS THEN GO TO	C98970
97880	HIST-SCALE.	C98970
97890	COMPUTE HIST-SCALE-VALUE > [HIST-TEMP < 99] / 100.	C98970
97895	IF HIST-SCALE-VALUE IS LESS THAN 1 MOVE 1 TO	C98970
97896	HIST-SCALE-VALUE.	C98970
97900	MOVE ZERO TO HIST-INDEX.	C98970
97910	HIST-SCALED-VALUE.	C98970
97920	ADD 1 TO HIST-INDEX.	C98970
97930	COMPUTE HIST-TABLE-SCALED [HIST-INDEX] >	C98970
97940	HIST-TABLE [HIST-INDEX] / HIST-SCALE-VALUE.	C98970
97950	IF HIST-INDEX IS LESS THAN HIST-NO-OF-INTERVALS THEN GO TO	C98970
97960	HIST-SCALED-VALUES.	C98970
98000	NOTE PREPARE OUTPUT DATA.	C98970
98010	DIVIDE 2 INTO HIST-INTERVAL-SIZE.	C98970
98020	MOVE ZERO TO HIST-CUM.	C98970
98030	MOVE ZERO TO HIST-LINE.	C98970
98040	HIST-PREPARE.	C98970
98050	ADD 1 TO HIST-LINE.	C98970
98060	MOVE HIST-LINE TO HIST-LINE-RPT.	C98970
98070	COMPUTE HIST-TEMP > HIST-UPPER-LIMIT [HIST-LINE]	C98970
98080	- HIST-INTERVAL-SIZE.	C98970
98090	MOVE HIST-TEMP TO HIST-MID-POINT-RPT.	C98970
98100	COMPUTE HIST-PERCENT > HIST-TABLE [HIST-LINE] * 100	C98970
98110	/ HIST-NO-OF-OBS.	C98970
98120	MOVE HIST-PERCENT TO HIST-PERCENT-RPT.	C98970
98130	ADD HIST-PERCENT TO HIST-CUM.	C98970

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98140     MOVE HIST-CUM TO HIST-CUM-RPT.                                C98970
98150     MOVE HIST-TABLE [HIST-LINE] TO HIST-FREQ-RPT.                C98970
98160     MOVE ZERO TO HIST-INDEX.                                       C98970
98170     IF HIST-DIST ?S NOT EQUAL TO :0: GO TO HIST-CUM-1.           C98970
98180     COMPUTE HIST-INDEX-2 > HIST-TABLE-SCALED [HIST-LINE] < 0.5.   C98970
98190     IF HIST-INDEX-2 IS EQUAL TO ZERO GO TO HIST-PREP-SPACE.        C98970
98200 HIST-PRLP-DIST.                                                    C98970
98210     ADD 1 TO HIST-INDEX.                                           C98970
98220     MOVE :0: TO HIST-POINT [HIST-INDEX].                          C98970
98230     IF HIST-INDEX IS LESS THAN HIST-INDEX-2 GO TO HIST-PREP-DIST. C98970
98240     IF HIST-INDEX IS EQUAL TO 100 THEN GO TO HIST-WRITE.          C98970
98250 HIST-PRLP-SPACE.                                                  C98970
98260     ADD 1 TO HIST-INDEX.                                           C98970
98270     MOVE SPACE TO HIST-POINT [HIST-INDEX].                        C98970
98280     IF HIST-INDEX IS LESS THAN 100 THEN GO TO HIST-PREP-SPACE.    C98970
98290     GO TO HIST-WRITE.                                               C98970
98300 HIST-CUM-1.                                                       C98970
98310     ADD 1 TO HIST-INDEX.                                           C98970
98320     MOVE SPACE TO HIST-POINT [HIST-INDEX].                        C98970
98330     IF HIST-INDEX IS LESS THAN 100 THEN GO TO HIST-CUM-1.         C98970
98338     COMPUTE HIST-INDEX > HIST-CUM < 0.5.                          C98970
98333     IF HIST-INDEX IS EQUAL TO ZERO GO TO HIST-WRITE.             C98970
98340     MOVE :0: TO HIST-POINT [HIST-INDEX].                          C98970
98400 HIST-WRITE.                                                       C98970
98410     WRITE HIST-REC FROM HIST-LINE-OUT.                            C98970
98412     ADD 1 TO HIST-LINE-CNT.                                         C98970
98414     IF HIST-PAGE-FLAG IS EQUAL TO ZERO GO TO HIST-NO-PAGING.     C98970
98415     IF HIST-LINE-CNT IS EQUAL TO HIST-PAGE-FLAG                    C98970
98416         THEN PERFORM HIST-PRINT-TITLE.                             C98970
98417 HIST-NO-PAGING.                                                    C98970
98420     IF HIST-LINE IS LESS THAN HIST-NO-OF-INTERVALS THEN GO TO    C98970
98430         HIST-PREPARE.                                               C98970
98440     WRITE HIST-REC FROM HIST-OUT-LINE.                              C98970
98450     MOVE HIST-SCALE-VALUE TO HIST-SCALE-RPT.                      C98970
98460     WRITE HIST-REC FROM HIST-SCALE-LINE.                           C98970
98470     IF HIST-OUT-RANGE-VALUE IS EQUAL TO ZERO GO TO HIST-WRITE-B. C98970
98480     MOVE HIST-OUT-RANGE-VALUE TO HIST-OUT-RANGE-RPT.              C98970
98490     WRITE HIST-REC FROM HIST-OUT-RANGE-REC.                       C98970
98500 HIST-WRITE-B.                                                      C98970
98510     WRITE HIST-REC FROM HIST-OUT-LINE.                             C98970
98520     GO TO END-HIST.                                                 C98970
99000 HIST-ERRKOR-1.                                                    C98970
99010     WRITE HIST-REC FROM HIST-TITLE.                                C98970
99020     MOVE HIST-ERR-1 TO HIST-TITLE-1.                              C98970
99030     MOVE HIST-NO-OF-OBS TO HIST-ERR-2.                            C98970
99040     WRITE HIST-REC FROM HIST-TITLE.                                C98970
99050     MOVE :1: TO HIST-FLAG.                                         C98970
99060     GO TO END-HIST.                                                 C98970
99100 HIST-ERRKOR-2.                                                    C98970
99110     MOVE HIST-ERR-4 TO HIST-TITLE-1.                              C98970
99120     MOVE HIST-ERR-3 TO HIST-TITLE-2.                              C98970
99130     WRITE HIST-REC FROM HIST-TITLE.                                C98970
99140     MOVE :1: TO HIST-FLAG.                                         C98970
99150     GO TO END-HIST.                                                 C98970
99200 HIST-ERRKOR-3.                                                    C98970
99210     MOVE :1: TO HIST-FLAG.                                         C98970
99990 END-HIST. EXIT.                                                  C98970
/*     PLACE CONROL SOURCE BEFORE                                     1440 CDS
//CHG,TFGIN DD *SPACE>[CYL,[1,1]]
TF6 DT03 11 0202080
    10 4
*END
/*     PLACE TFG DATA BEFORE THIS CARD
//TPR,TU12 OU DISP>[OLD,KEEP],VOL>SER>+F1,UNIT>T+F1 T12
//TPR,TU25 OU DISP>[OLD,KEEP],VOL>SER>+F8,UNIT>T+F8 T25
//TPR,TPHIN DD *SPACE>[TRK,[1,1]]
T/P TU12 10100202020
T/P TU25 1100130R000
/*     PLACE T/P CONTRL CARDS BEFORE THIS CARD

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### 6.10.1 MEASURE OBSERVATIONS AT AIRCRAFT LEVEL

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40600	01	SN-TOTAL SYNC.			C98970
40610	02	CAN-CONTROL	PICTURE X	VALUE SPACE.	C98970
40620	02	FM-10T	PICTURE ZZZZZ9.		C98970
40630	02	FILLER	PICTURE X	VALUE SPACE.	C98970
40640	02	SORTIES-TJT	PICTURE ZZZZ9.		C98970
40650	02	FILLER	PICTURE X	VALUE SPACE.	C98970
40660	02	LANDINGS-TOT	PICTURE ZZZZ9.		C98970
40670	02	FILLER	PICTURE X	VALUE SPACE.	C98970
40680	02	TYPE-1-TCT	PICTURE ZZZZZ9.		C98970
40690	02	FILLER	PICTURE X	VALUE SPACE.	C98970
40700	02	TYPE-3-TOT	PICTURE ZZZZZZ9.		C98970
40710	02	FILLER	PICTURE X	VALUE SPACE.	C98970
40720	02	TYPE-4-TCT	PICTURE ZZZZZZ9.		C98970
40730	02	FILLER	PICTURE X	VALUE SPACE.	C98970
40740	02	SN-TOT	PICTURE X(8).		C98970
40750	02	FILLER	PICTURE X	VALUE SPACE.	C98970
40760	02	SG-TOT	PICTURE ZZZZZ9.		C98970
40770	02	FILLER	PICTURE X	VALUE SPACE.	C98970
40780	02	NSG-TOT	PICTURE ZZZZZ9.		C98970
40790	02	REC-KP-TCT	PICTURE X(15)	VALUE SPACE.	C98970
40800	01	RCO-TOTALS SYNC.			C98970
40810	02	FILLER	PICTURE X	VALUE SPACE.	C98970
40820	02	RECORUS-INPUT	PICTURE ZZZZZZ9.		C98970
40830	02	FILLER	PICTURE X	VALUE SPACE.	C98970
40840	02	OBSERVE-CUT	PICTURE ZZZZZZ9.		C98970
40845	02	FILLER	PICTURE X(5)	VALUE SPACE.	C98970
40865	02	SG-TOT	PICTURE ZZZZZZ9.		C98970
40870	02	FILLER	PICTURE X	VALUE SPACE.	C98970
40875	02	NSG-TOT	PICTURE ZZZZZZ9.		C98970
40880	02	FILLER	PICTURE X	VALUE SPACE.	C98970
40890	02	P1-G-TOT	PICTURE ZZZZZZ9.		C98970
40900	02	FILLER	PICTURE X	VALUE SPACE.	C98970
40910	02	R2-G-TOT	PICTURE ZZZZZZ9.		C98970
40920	02	FILLER	PICTURE X	VALUE SPACE.	C98970
40930	02	R3-G-TOT	PICTURE ZZZZZZ9.		C98970
40940	02	FILLER	PICTURE X(20)	VALUE SPACE.	C98970
40980	01	RCO-KP-BLANK SYNC.			C98970
40990	02	FILLER	PICTURE X(80)	VALUE SPACE.	C98970
41000	01	RCO-KP-CARD SYNC.			C98970
41010	02	FILLER	PICTURE X(80)	VALUE SPACE.	C98970
41400	01	RCO-KP-IAPE SYNC.			C98970
41410	02	FILLER	PICTURE X(80)	VALUE SPACE.	C98970
42000	01	O-REC SYNC.			C98970
42010	02	FILLER	PICTURE XX	VALUE SPACE.	C98970
42020	02	SN-U	PICTURE X(A).		C98970
42030	02	IU-U	PICTURE X(K).		C98970
42035	02	FILLER	PICTURE X	VALUE SPACE.	C98970
42040	02	OU-1	PICTURE X(6).		C98970
42045	02	FILLER	PICTURE X	VALUE SPACE.	C98970
42050	02	OU-2	PICTURE X(6).		C98970
42055	02	FILLER	PICTURE X	VALUE SPACE.	C98970
42060	02	OU-3	PICTURE X(6).		C98970
42065	02	FILLER	PICTURE XX	VALUE SPACE.	C98970
42070	02	RCO-MK-U	PICTURE X	VALUE :#1.	C98970
48000		LINKAGE SECTION.			C98970
48010	77	INTYP	PICTURE S9(6)	COMPUTATIONAL SYNC.	C98970
48020	77	IEOFI	PICTURE S9(6)	COMPUTATIONAL SYNC.	C98970
48070	77	ISN	PICTURE S9(6)	COMPUTATIONAL SYNC.	C98970
48080	77	IWK	PICTURE S9(6)	COMPUTATIONAL SYNC.	C98970
48090	77	IWULI2	PICTURE S9(6)	COMPUTATIONAL SYNC.	C98970
48100	77	XWUC3	PICTURE X(4).		C98970
48110	77	XWUC4	PICTURE X(4).		C98970
48120	77	XWUC5	PICTURE X(4).		C98970
48130	77	XWDL	PICTURE X(4).		C98970
48140	77	XHMC	PICTURE X(4).		C98970
48150	77	IUNIT5	PICTURE S9(6)	COMPUTATIONAL SYNC.	C98970
48160	77	ILAUOR	PICTURE S9(6)	COMPUTATIONAL SYNC.	C98970
48170	77	IAIL	PICTURE S9(6)	COMPUTATIONAL SYNC.	C98970
48180	77	INOKM	PICTURE S9(6)	COMPUTATIONAL SYNC.	C98970
48190	77	INOKS	PICTURE S9(6)	COMPUTATIONAL SYNC.	C98970
48200	77	ITYPE	PICTURE S9(6)	COMPUTATIONAL SYNC.	C98970
48220	77	ISFH	PICTURE S9(6)	COMPUTATIONAL SYNC.	C98970
48230	77	ISSUPT	PICTURE S9(6)	COMPUTATIONAL SYNC.	C98970
48240	77	ISLAND	PICTURE S9(6)	COMPUTATIONAL SYNC.	C98970
49000	77	INI	PICTURE S9(6)	COMPUTATIONAL SYNC.	C98970
49010	77	ITI	PICTURE S9(6)	COMPUTATIONAL SYNC.	C98970
49020	77	IDATA1	PICTURE S9(8)	COMPUTATIONAL SYNC.	C98970
49030	77	IDATA2	PICTURE S9(8)	COMPUTATIONAL SYNC.	C98970
49040	77	ABLANK	PICTURE X(4).		C98970
49220	77	IBSGC1	PICTURE S9(6)	COMPUTATIONAL SYNC.	C98970
49230	77	ABSGC2	PICTURE X(4).		C98970
49240	77	ABSGC3	PICTURE X(4).		C98970
49250	77	ABSGC4	PICTURE X(4).		C98970
49300	77	IAI	PICTURE X(4).		C98970
49310	77	IA2	PICTURE X(4).		C98970

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49320 77 IA3      PICTURE X(4).          C98970
49330 77 IA4      PICTURE X(4).          C98970
49340 77 IA5      PICTURE X(4).          C98970
49350 77 IA6      PICTURE X(4).          C98970
49360 77 IA7      PICTURE X(4).          C98970
49370 77 IA8      PICTURE X(4).          C98970
49380 77 IA9      PICTURE X(4).          C98970
49400 77 ISNO     PICTURE S9(6)          C98970
49410 77 IDO      PICTURE S9(6)          C98970
49420 77 IOR1     PICTURE S9(6)          C98970
49430 77 IOR2     PICTURE S9(6)          C98970
49440 77 IOR3     PICTURE S9(6)          C98970
50000 PROCEDURE DIVISION.
50010 CAH01.
50012 ENTRY :CREAD1: USING IN1, IT1, IDATA1, IDATA2, ABLANK.
50020 IF EFLAG EQUAL 1: GO TO READ-1.
50030 OPEN OUTPUT 'CD-KP-FILE OFILE1.
50035 OPEN INPUT 'G-FILE MSG-FILE CARD-FILE.
50040 MOVE 1: TO EFLAG.
50050 READ-1.
50060 PERFORM READ A-CARD THRU CARD-EXIT.
50070 IF CARD-EOF-SW EQUAL 1: GO TO READ-1-EXIT.
50080 ADD 1 TO CARD-CNT1.
50090 MOVE-LINK1.
50100 MOVE UATA2-1 TO IDATA2.
50110 MOVE ABLANK-1 TO ABLANK.
50120 READ-1-EXIT.
50130 MOVE UATA1-1 TO IDATA1.
50140 GOBACK.
50150 CAH02.
50160 ENTRY :CREAD2: USING IN1, IT1, ISG0C1, ABSG0C2, ABSG0C3,
50170 ABSG0C4.
50180 PERFORM READ-A-CARD THRU CARD-EXIT.
50190 IF CARD-EOF-SW EQUAL 1: GO TO READ-2-EXIT.
50200 ADD 1 TO CARD-CNT2.
50210 MOVE-LINK2.
50220 MOVE ISG0C1-2 TO ISG0C1.
50230 MOVE ABSG0C2-2 TO ABSG0C2.
50240 MOVE ABSG0C3-2 TO ABSG0C3.
50250 MOVE ABSG0C4-2 TO ABSG0C4.
50260 READ-2-EXIT.
50270 GOBACK.
50280 CAH03.
50290 ENTRY :CREAD3: USING IN1, IT1, IA1, IA2, IA3, IA4, IA5,
50300 IA6, IA7, IA8, IA9.
50310 PERFORM READ-A-CARD THRU CARD-EXIT.
50320 IF CARD-EOF-SW EQUAL 1: GO TO READ-3-EXIT.
50330 ADD 1 TO CARD-CNT3.
50340 MOVE-LINK3.
50350 MOVE A1-3 TO IA1.
50360 MOVE A2-3 TO IA2.
50370 MOVE A3-3 TO IA3.
50380 MOVE A4-3 TO IA4.
50390 MOVE A5-3 TO IA5.
50400 MOVE A6-3 TO IA6.
50410 MOVE A7-3 TO IA7.
50420 MOVE A8-3 TO IA8.
50430 MOVE A9-3 TO IA9.
50440 READ-3-EXIT.
50450 GOBACK.
50460 TAPES-IN.
50470 ENTRY :COH01: USING INTYP, IEOF1,
50480 ISN, INK, IWUC12, XWUC3, XWUC4, XWUC5, XWDC, XHMC,
50490 IUNITS, ILABOR, IAIE, INORM, INORS, ITYPE, ISFH,
50500 ISSORT, ISLAND.
50510 IF INTYP EQUAL MSG-ID GO TO READ-MSG-1.
50520 PERFORM READ-SG THRU READ-SG-EXIT.
50530 IF IEOF1 EQUAL 1 GO TO TAPE-EXIT-SG.
50540 ADD 1 TO SG-CNT.
50550 MOVE-LINK-SG.
50560 MOVE SN TO ISN.
50570 MOVE WK TO INK.
50580 MOVE WUC12 TO IWUC12.
50590 MOVE WUC3 TO XWUC3.
50600 MOVE WUC4 TO XWUC4.
50610 MOVE WUC5 TO XWUC5.
50620 MOVE WDC TO XWDC.
50630 MOVE HMC TO XHMC.
50640 MOVE UNITS TO IUNITS.
50650 MOVE LABOR TO ILABOR.
50660 MOVE AIE TO IAIE.
50670 MOVE NORM TO INORM.
50680 MOVE NORS TO INORS.
50690 MOVE ITYPE-N TO ITYPE.
50700 MOVE SFH TO ISFH.
50710 MOVE SSORT TO ISSORT.
50720 MOVE SLAND TO ISLAND.

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55400	TAPE-EXIT-SG.	C98970
55410	GOBACK.	C98970
55500	READ-MSG-1.	C98970
55510	PERFORM READ-MSG THRU READ-MSG-EXIT.	C98970
55520	IF ILOF1 EQUAL 2 GO TO TAPE-EXIT-MSG.	C98970
55530	ADD 1 TO MSG-CNT.	C98970
55600	MOVE-LINK-MSG.	C98970
55610	MOVE SN TO ISN.	C98970
55620	MOVE WK TO IWK.	C98970
55630	MOVE WUC12 TO IWUC12.	C98970
55640	MOVE WUC3 TO XWUC3.	C98970
55650	MOVE WUC4 TO XWUC4.	C98970
55660	MOVE WUC5 TO XWUC5.	C98970
55670	MOVE WUC TO XWUC.	C98970
55680	MOVE HMC TO XHMC.	C98970
55690	MOVE UNITS TO IUNITS.	C98970
55700	MOVE LABOR TO ILABOR.	C98970
55705	IF TYPE-N EQUAL :4: GO TO BY-PASS-TYPE-4.	C98970
55710	MOVE AIE TO IAIE.	C98970
55720	MOVE NORM TO INORM.	C98970
55730	MOVE NORS TO INORS.	C98970
55735	BY-PASS-TYPE-4.	C98970
55740	MOVE TYPE-N TO ITYPE.	C98970
55750	MOVE SFH TO ISFH.	C98970
55760	MOVE SORT TO ISSORT.	C98970
55770	MOVE SLAND TO ISLAND.	C98970
55900	TAPE-EXIT-MSG.	C98970
55910	GOBACK.	C98970
57000	TAPE-01.	C98970
57010	ENTRY :COBOUT: USING ISNO, IDO, IOB1, IOB2, IOB3.	C98970
57040	MOVE ISNO TO SN-0.	C98970
57050	MOVE IDO TO ID-0.	C98970
57060	MOVE IOB1 TO OB-1.	C98970
57070	MOVE IOB2 TO OB-2.	C98970
57080	MOVE IOB3 TO OB-3.	C98970
57170	WRITE OFILE1-REC FROM 0-REC.	C98970
57180	ADD 1 TO RECORDS-PASS.	C98970
57190	GOBACK.	C98970
59000	READ-A-CARD.	C98970
59010	READ CARD-FILE INTO CARD-DATA	C98970
59020	AT END GO TO CARD-EOF.	C98970
59030	IF TEST-123 EQUAL :99: GO TO CARD-EOF.	C98970
59040	NOTE DEBLG WRITE CARD IMAGEX XX XX.	C98970
59050	MOVE CARD-DATA TO RCD-KP-CARD.	C98970
59060	WRITE RCD-KP FROM RCD-KP-CARD.	C98970
59070	ADD 1 TO RCD-KP-CNT.	C98970
59090	GO TO CARD-EXIT.	C98970
59100	CARD-EOF.	C98970
59110	CLOSE CARD-FILE WITH LOCK.	C98970
59120	MOVE :1: TO CARD-EOF-SW.	C98970
59130	CARD-EXIT. EXIT.	C98970
59200	READ-SG.	C98970
59210	READ SG-FILE INTO SG-MSG-REC	C98970
59220	AT END GO TO SG-EOF.	C98970
59230	IF TYPE-N EQUAL :9: GO TO SG-EOF.	C98970
59290	GO TO READ-SG-EXIT.	C98970
59300	SG-EOF.	C98970
59310	CLOSE SG-FILE WITH LOCK.	C98970
59320	MOVE 1 TO ILOF1 SGEOF.	C98970
59330	READ-SG-EXIT. EXIT.	C98970
59500	READ-MSG.	C98970
59510	READ MSG-FILE INTO SG-MSG-REC	C98970
59520	AT END GO TO MSG-EOF.	C98970
59530	IF TYPE-N EQUAL :4: GO TO MSG-EOF.	C98970
59590	GO TO READ-MSG-EXIT.	C98970
59600	MSG-EOF.	C98970
59610	CLOSE MSG-FILE WITH LOCK.	C98970
59620	MOVE 2 TO ILOF1 MSGEOF.	C98970
59630	READ-MSG-EXIT. EXIT.	C98970
61000	BLOCK-CHECK.	C98970
61010	ENTRY :CLOSEF: USING IT1.	C98970
61100	EOJ-RCD-KEEPING.	C98970
61110	MOVE SG-CN TO SG-GTOT.	C98970
61120	MOVE MSG-CN TO MSG-GTOT.	C98970
61130	MOVE CARD-CNT1 TO R1-GTOT.	C98970
61140	MOVE CARD-CNT2 TO R2-GTOT.	C98970
61150	MOVE CARD-CNT3 TO R3-GTOT.	C98970
61160	COMPUTE RECORDS-READ > CARD-CNT1 < CARD-CNT2 < CARD-CNT3.	C98970
61170	MOVE RECORDS-READ TO RECORDS-INPUT.	C98970
61180	MOVE RECORDS-PASS TO OBSERVE-OUT.	C98970
61300	WRITE RCD-KP FROM RCD-TOTALS.	C98970
61310	ADD 1 TO RCD-KP-CNT.	C98970
62010	COMPUTE KOUT > RECORDS-PASS - ((RECORDS-PASS / 703 * 703).	C98970





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//C9897U) EXEC P964SG,PARM,ASSY>[MAP,LIST,BCD],
// PARM,LKED>[LIST,XREF:,TIME>06,ACCT>D35323007
//ASSY.SYSIN DD DAT,SPACE>[CYL:[1,1]]
C FORTRAN-COBOL LINK TEST. JOHN LINK.
C 19 APRIL 1972
C THIS DRIVER CALCULATES OBSERVATIONS FOR GROUPS 1 - 6
C THIS PROGRAM GENERATE OBSERVATION DATA TAPES FOR FUTURE ANALYSIS
C OBSERVATION TAPE FOR AIRCRAFT LEVEL
C
C COLUMN VALUE DESCRIPTION
C J-10 ZERO AIRCRAFT LEVEL
C
C 12 1 NON ISO
C ISO
C 13-14 0 NORM HOURS / PERIODIC
C 02 NORM HOURS / HOURLY POSTFLIGHT
C 03 AIE / SORTIE
C 04 FH / WEEK
C 05 SORTIE / WEEK
C 06 LANDING / WEEK
C 15 1 ORIGINS - HOURLY POSTFLIGHT
C 1 ORIGINS - MA
C 1 ORIGINS - PERIODIC
C 16 1 INDEPENDENT VARIABLE - WEEK
C 1 INDEPENDENT VARIABLE - FLIGHT HOURS
C 1 INDEPENDENT VARIABLE - SORTIE
C 4 INDEPENDENT VARIABLE - LANDING
C 14-23 NUMERATOR OF DEPENDENT VARIABLE
C 25-30 DENOMINATOR OF DEPENDENT VARIABLE
C 32-37 INDEPENDENT VARIABLE
C
C COMMON SECTION
C *****
C COMMON AIE,BLANK,BSGC,CHSGI,CI,CNORM,CSGN,CTYPE,CWK,DCT,DDN,
1 DFH,DICT,UIFH,D,L,UIS,DL,DS,DUMMY,DWK,ENSGWK,ESGWK,ETIME,ETN,HMC,
2 IU,IN,IT,IWAY,NNSG,NORS,NSGBC,NSGCFH,NSGCL,NSGCS,NSGEOF,NSGF,
3 NSGHR,NSGN,NSGNOM,NSGSN,NSGU,NSGWK,NSGWUC,OAIE,OFLEI,OUT,PDATA,
4 PDATA ,PISGWK,PPI,PS,PSGCFH,PSGCL,PSGCS,PSGDL,PSGI,PSGK,PSGL,
5 PSGWK,PTN,PWKI,ETIME,SGCFH,SGCL,SGCS,SGEOF,SGF,SGFH,SGHR,SQL,
6 SGN,SGNORM,SGPI,SGSN,SGU,SGWK,SGWUC,SSN,SSSWK,SSTIME,SSTNO,
7 STIME,STN,TYPE,WUC
C DIMENSION SECTION
C *****
C DIMENSION CNORM(2),CWK(3),NSGWUC(4),PDATA(4),PIDATA(4),
1 PWKI(3),SGNI(2),SGWUC(4)
C DIMENSION BSGC(4,3)
C TYPE SPECIFICATION SECTION
C *****
C INTEGER AIE,BLANK,BSGC,CHSGI,CI,CNORM,CSGN,CTYPE,CWK,DCT,DDN,
1 DFH,DICT,UIFH,D,L,DIS,DL,DS,DUMMY,DWK,ENSGWK,ESGWK,ETIME,ETN,HMC,
2 IU,IN,IT,IWAY,NNSG,NORS,NSGBC,NSGCFH,NSGCL,NSGCS,NSGEOF,NSGF,
3 NSGHR,NSGN,NSGNOM,NSGSN,NSGU,NSGWK,NSGWUC,OAIE,OFLEI,OUT,PDATA,
4 PDATA ,PNSGWK,PPI,PS,PSGCFH,PSGCL,PSGCS,PSGDL,PSGI,PSGK,PSGL,
5 PSGWK,PTN,PWKI,ETIME,SGCFH,SGCL,SGCS,SGEOF,SGF,SGFH,SGHR,SQL,
6 SGN,SGNORM,SGPI,SGSN,SGU,SGWK,SGWUC,SSN,SSSWK,SSTIME,SSTNO,
7 STIME,STN,TYPE,WUC
C *****
C READ IN CARD INPUT DESCRIPTION FOR GROUPS 1-6
C CALL CINI
C *****
C POSITION THE SGWUC FILE FOR THE FIRST TIME ONLY
C READ A SUPPORT GENERAL RECORD FROM THE DATA BANK VIA COBOL ON S0F
C TYPE = 1
C300 CALL CDP1
C CHECK TAIL NUMBER AGAINST 99999999 ERROR
C IF (SGSN = 9999999) 305,10000,305
C CHECK END OF FILE FOR ERROR
C305 IF (SGEOF) 10000,310,10000
C CHECK TAIL NUMBER AGAINST STARTING TAIL NUMBER
C310 IF (SGSN = STN) .00,320,320
C READ A NON-SUPPORT GENERAL RECORD FOR FIRST TIME
C320 TYPE = 2
C CALL CDB1
C CHECK TAIL NUMBER AGAINST 99999999 ERROR
C IF (NSGSN = 99999999) 325,10000,325
C CHECK END OF FILE FOR ERROR
C325 IF (NSGEOF) 10000,330,10000
C POSITION THE SG FILE
C330 CALL SGPU51
C FIND END OF INITIAL INSPECTION
C FIND END OF CURRENT INSPECTION
C335 CALL FESG1
C CHECK FOR PREVIOUS INSPECTION FLAG
C IF (PSGI) 340,340,805
C SAVE REQUIRED DATA FROM THE SG RECORD

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340 PDATA(1) = PSGWK
PDATA(2) = PSGCFH
PDATA(3) = PSGCS
PDATA(4) = PSGCL
C SET UP NEW ORIGINS
DO 800 I=1,NSG7C
PWKI(1) = CWK(1)
800 CONTINUE
C CHECK TO SEE IF INSPECTION IS A PERIODIC
805 IF (CWK(SGPI)) A10,810,817
C CHECK IF THERE WAS EVER A PERIODIC
810 IF (PPI) A25,A25,820
C SAVE LAST PERIODIC INFORMATION
817 PPI = 1
PS = PSGCS
PIDATA(1) = PSGWK
PIDATA(2) = PSGCFH
PIDATA(3) = PSGCS
PIDATA(4) = PSGCL
C CALCULATE GROUPS 3,4,5,6
820 CALL FLNSGI
C WAS THERE A PREVIOUS INSPECTION
825 IF (PSGI) 900,900,830
C DO NORM DATA
830 CALL VARIT2
900 PSGI = CI
C CHECK FOR CHANGE IN TAIL NUMBER
IF (PTN - SGN) 1000,920,1000
920 IF (PTN - NSGN) 1000,930,1000
C CHECK FOR END OF TIME
930 IF (SETIME - SGWK) 1100,950,950
950 IF (SETIME - NSGWK) 1100,935,935
C TEST TAIL NUMBER AGAINST BLOCKING FLAG
1000 IF (SGSN - 99999999) 1015,11000,11000
1015 IF (SGEOF) 11000, 020,11000
1020 IF (NSGSN - 99999999) 1025,11000,11000
1025 IF (NSGEUF) 11000,1029,11000
C CHECK FOR LAST TAIL NUMBER
1029 IF (NSGSN - LTN) 1030,1030,11000
1030 IF (SGSN - ETN) 1040,1040,11000
1040 IWAY = 1
GO TO 330
1160 IWAY = 2
GO TO 330
10000 CONTINUE
WRITE (6,10010)
10010 FORMAT (7H STOP)
GO TO 11010
11000 CONTINUE
WRITE (6,11005)
11005 FORMAT (7H STOP)
11010 CONTINUE
IT1 = 0
CALL CLOSEF (111)
CALL EIJMSG
CALL EXIT
END
SUBROUTINE CINI
C THIS SUBROUTINE READS IN THE MODEL DEFINITION FOR GROUP 1
C ALSO BASIC INITIALIZATION
C COMMON SECTION
C
C-----
COMMON AIE,BLANK,BSGC,CBSGI,CI,CNORM,CSGN,CTYPE,CWK,DCT,DDN,
1 OFH,DICT,UIFH,DIL,DIS,DL,DS,DUMMY,DWK,ENSGWK,ESGWK,ETIME,ETN,HMC,
2 ID,IN,IT,IWAY,NN,GNORS,NSGBC,NSGCFH,NSGCL,NSGCS,NSGEUF,NSGF,
3 NSGHR,NSGN,NSGNOM,NSGSN,NSGU,NSGWK,NSGWUC,OAIE,OF,ILE1,OUT,PDATA,
4 PIDATA ,PNSGWK,PPI,PS,PSGCFH,PSGCL,PSGCS,PSGDL,PSGI,PSOK,PSOL,
5 PSGWK,PTN,PWKI,SETIME,SGCFH,SGCL,SGCS,SGEOF,SGF,SGFH,SGHR,SGL,
6 SGN1,SGNORM,SGPI,SGSN,SGU,SGWK,SGWUC,SSN,SSSWK,SSTIME,SSTNQ,
7STIME,STN,TYPE,WDC
C DIMENSION SECTION
C
C-----
DIMENSION CNORM(2),CWK(3),NSGWUC(4),PDATA(4),PIDATA(4),
1 PWKI(3),SGNI(2),SGWUC(4)
DIMENSION BSGC(4,3)
C
C-----
C TYPE SPECIFICATION SECTION
C
C-----
INTEGER AIE,BLANK,BSGC,CBSGI,CI,CNORM,CSGN,CTYPE,CWK,DCT,DDN,
1 OFH,DICT,UIFH,DIL,DIS,DL,DS,DUMMY,DWK,ENSGWK,ESGWK,ETIME,ETN,HMC,
2 ID,IN,IT,IWAY,NN,GNORS,NSGBC,NSGCFH,NSGCL,NSGCS,NSGEUF,NSGF,
3 NSGHR,NSGN,NSGNOM,NSGSN,NSGU,NSGWK,NSGWUC,OAIE,OF,ILE1,OUT,PDATA,
4 PIDATA ,PNSGWK,PPI,PS,PSGCFH,PSGCL,PSGCS,PSGDL,PSGI,PSOK,PSOL,
5 PSGWK,PTN,PWKI,SETIME,SGCFH,SGCL,SGCS,SGEOF,SGF,SGFH,SGHR,SGL,
6 SGN1,SGNORM,SGPI,SGSN,SGU,SGWK,SGWUC,SSN,SSSWK,SSTIME,SSTNQ,
7STIME,STN,TYPE,WDC
C
C-----

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C      BASIC INITIALIZATION SECTION
C      INITIALIZE FILE NUMBERS
      OFILL1 = 1
      IN = 5
      OUT = 6
      SGF = 11
      NSGF = 12
C      INITIALIZE FLAGS
      LCFINE = 0
      NSGEOF = 0
      IWAY = 1
      NNSG = 2
      NSGBC = 3
      IT = 1
C      -----
C      CARD INPUT DEFINITION SECTION
C      -----
C      THE FOLLOWING COMMENTS TELL HOW YOU READ DATA IN VIA FORTRAN
C      READ IN START WEEK AND END WEEK OF ANALYSIS
C      READ IN A BLANK FIELD
C      READ (IN,5) STIME,ETIME,BLANK
C      5 FORMAT (2I10,A4)
C      READ IN TAILNUMBER RANGE
C      READ (IN,5) STN,ETN
C      READ IN SUPPORT GENERAL NORM INDICES
C      READ (IN,5) (SGNI(I),I=1,NNSG)
C      READ IN SUPPORT GENERAL PERIODIC INDEX
C      READ (IN,5) SGPI
C      READ IN BASIC SUPPORT GENERAL CODES
C      DO 50 I=1,NSGBC
C      READ (IN,15) (HSGC(J,I),J=1,4)
C      15 FORMAT (12,3A1)
C      50 CONTINUE
C      READ IN FIRS AIRCRAFT SUBSET INFORMATION
C      READ (IN,5) SSTNO,SSSWK
C      -----
C      THE FOLLOWING IS HOW YOU READ CARD INPUT VIA COBOL LINKAGE
C      READ IN START WEEK AND END WEEK OF ANALYSIS
C      READ IN A BLANK FIELD
C      CALL CREAD1
C      1 (IN,IT,STIME,ETIME,BLANK)
C      READ IN TAILNUMBER RANGE
C      CALL CREAD1
C      1 (IN,IT,STN,ETN,DUMMY)
C      READ IN SUPPORT GENERAL NORM INDICES
C      CALL CREAD1
C      1 (IN,IT,SGNI(1),SGNI(2),DUMMY)
C      READ IN SUPPORT GENERAL PERIODIC INDEX
C      CALL CREAD1
C      1 (IN,IT,SGPI,DUMMY,DUMMY)
C      READ IN BASIC SUPPORT GENERAL CODES
C      IT = 2
C      DO 50 I=1,NSGBC
C      CALL CREAD2
C      1 (IN,IT,BSGC(1,I),BSGC(2,I),BSGC(3,I),BSGC(4,I))
C      50 CONTINUE
C      IT = 1
C      READ IN FIRS AIRCRAFT SUBSET INFORMATION
C      CALL CREAD1
C      1 (IN,IT,SSTNO,SSSWK,DUMMY)
C      IF (IT = 3) 65,66,65
C      60 CALL CREAD3
C      1 (IN,IT,DUMMY,DUMMY,DUMMY,DUMMY,DUMMY)
C      2 DUMMY,DUMMY,DUMMY,DUMMY)
C      65 CONTINUE
C      RETURN
C      END
C      SUBROUTINE CUB1
C      THIS SUBROUTINE CALL A COBOL SUBROUTINE TO READ THE DATA BANK
C      COMMON SECTION
C      -----
C      COMMON      AIE,BLANK,BSGC,CRS01,C1,CNORM,CSON,CTYPE,CWK,DCT,UDN,
C      1 DFH,DICT,DIFH,DIL,DIS,DL,DS,DUMMY,DWK,ENSWK,ESGWK,ETIME,ETN,HMC,
C      2 ID,IN,I1,IWAY,NNSG,NONS,NSGBC,NSGCFH,NSGCL,NSGCS,NSGEOF,NSGF,
C      3 NSGHR,NSGN,NSGNC,NSGSN,NSGU,NSGWK,NSGWUC,OAIE,OFIL1,OUT,PDATA,
C      4 PIDATA,PSGWK,PPI,PS,PSGCFH,PSGCL,PSGCS,PSGDL,PSGI,PSGK,PSGL,
C      5 PSGWK,PTN,PWKI,SETIME,SGCFH,SGCL,SGCS,SGEOF,SGF,SGFH,SGHR,SQL,
C      6 SGNI,SGNORM,SGPI,SGSN,SGU,SGWK,SGWUC,SSN,SSSWK,SSTIME,SSTNO,
C      7 STIME,STN,TYPE,WC
C      DIMENSION SECTION
C      -----
C      DIMENSION      CNORM(2),CWK(3),NSGWUC(4),PDATA(4),PIDATA(4),
C      1 PWKI(3),SGNI(2),SGWUC(4)
C      DIMENSION BSGC(4,3)
C      TYPE SPECIFICATION SECTION

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C      +-----+-----+-----+-----+-----+-----+-----+-----+-----+
C      INTEGER AIE,RLANK,BSGC,CBSGI,CI,CNORM,CSGN,CTYPE,CWK,DCT,DDN,
1  DFH,DICI,DIFH,DIL,DIS,DL,DS,DUMMY,DWK,ENSGWK,ESGWK,ETIME,ETN,HMC,
2  ID,IN,IT,IWAY,NNSG,NORS,NSGHC,NSGCFH,NSGCL,NSGCS,NSGEOF,NSGF,
3  NSGHR,NSGN,NSGNCM,NSGSN,NSGU,NSGWK,NSGWUC,OAIE,OFILEI,OUT,PDATA,
4  PIDATA,PNSGWK,PPI,PS,PSGCFH,PSGCL,PSGCS,PSGDL,PSGI,PSGK,PSGL,
5  PSGWK,PTN,PAKI,SETIME,SGCFH,SGCL,SGCS,SGEOF,SGF,SGFH,SGHR,SQL,
6  SSMI,SGNORM,SGPI,SGSN,SGU,SGWK,SGWUC,SSN,SSSWK,SSTIME,SSTNO,
7  STIME,STN,TYPE,WDC
C      GO TO (IU,10U),TYPE
C      READ A SUPPORT GENERAL RECORD
10  CALL CORRCI
C      * (SGF,SGEOF,SGSN,SGWK,SGWUC(1),SGWUC(2),SGWUC(3),SGWUC(4),DUMMY,
C      * DUMMY,SGU,SGHR,DUMMY,SGNORM,DUMMY,SGFH,SGCFH,SGCS,SGCL)
C      CHECK NORM HOURS
C      IF (SGNORM) 20,40 40
20  SGNORM = 0
40  RETURN
C      READ A NON-SUPPORT GENERAL RECORD
100 CALL CORRCI
C      * (NSGF,NSGEOF,NSGSN,NSGWK,NSGWUC(1),NSGWUC(2),NSGWUC(3),NSGWUC(4),
C      * WUC,HMC,NSGU,NSGIR,AIE,NSGNOM,NORS,CTYPE,NSGCFH,NSGCS,NSGCL)
C      RETURN
C      END
C      SUBROUTINE SuPos1
C      THIS SUBROUTINE POSITION SG FILE FOR NEW AIRCRAFT SUBSET DEPENDING
C      ON IWAY FOR GROUP, I-6
C      COMMON /SECTION
C      +-----+-----+-----+-----+-----+-----+-----+-----+-----+
C      COMMON AIE,RLANK,BSGC,CBSGI,CI,CNORM,CSGN,CTYPE,CWK,DCT,DDN,
1  DFH,DICI,DIFH,DIL,DIS,DL,DS,DUMMY,DWK,ENSGWK,ESGWK,ETIME,ETN,HMC,
2  ID,IN,IT,IWAY,NNSG,NORS,NSGHC,NSGCFH,NSGCL,NSGCS,NSGEOF,NSGF,
3  NSGHR,NSGN,NSGNCM,NSGSN,NSGU,NSGWK,NSGWUC,OAIE,OFILEI,OUT,PDATA,
4  PIDATA,PNSGWK,PPI,PS,PSGCFH,PSGCL,PSGCS,PSGDL,PSGI,PSGK,PSGL,
5  PSGWK,PTN,PAKI,SETIME,SGCFH,SGCL,SGCS,SGEOF,SGF,SGFH,SGHR,SQL,
6  SSMI,SGNORM,SGPI,SGSN,SGU,SGWK,SGWUC,SSN,SSSWK,SSTIME,SSTNO,
7  STIME,STN,TYPE,WDC
C      DIMENSION SECTION
C      +-----+-----+-----+-----+-----+-----+-----+-----+-----+
C      DIMENSION CNORM(2),CWK(3),NSGWUC(4),PDATA(4),PIDATA(4),
1  PAKI(3),SSMI(2),SGWUC(4)
C      DIMENSION BSGC(4,3)
C      TYPE SPECIFICATION SECTION
C      +-----+-----+-----+-----+-----+-----+-----+-----+-----+
C      INTEGER AIE,RLANK,BSGC,CBSGI,CI,CNORM,CSGN,CTYPE,CWK,DCT,DDN,
1  DFH,DICI,DIFH,DIL,DIS,DL,DS,DUMMY,DWK,ENSGWK,ESGWK,ETIME,ETN,HMC,
2  ID,IN,IT,IWAY,NNSG,NORS,NSGHC,NSGCFH,NSGCL,NSGCS,NSGEOF,NSGF,
3  NSGHR,NSGN,NSGNCM,NSGSN,NSGU,NSGWK,NSGWUC,OAIE,OFILEI,OUT,PDATA,
4  PIDATA,PNSGWK,PPI,PS,PSGCFH,PSGCL,PSGCS,PSGDL,PSGI,PSGK,PSGL,
5  PSGWK,PTN,PAKI,SETIME,SGCFH,SGCL,SGCS,SGEOF,SGF,SGFH,SGHR,SQL,
6  SSMI,SGNORM,SGPI,SGSN,SGU,SGWK,SGWUC,SSN,SSSWK,SSTIME,SSTNO,
7  STIME,STN,TYPE,WDC
C      INITIALIZE PREVIOUS WEEK INDICES TO -1
C      +-----+-----+-----+-----+-----+-----+-----+-----+-----+
C      SET PSGI TO ZERO
C      PSGI = 0
C      SET PPI TO ZERO
C      PPI = 0
C      INITIALIZE PREVIOUS WEEK INDICES TO -1
C      DO 300 I=1,NSGRC
C      PAKI(I) = -1
300  CONTINUE
C      GO TO (320,325),IWAY
C      +-----+-----+-----+-----+-----+-----+-----+-----+-----+
C      ENTER HERE FOR BEGINNING OF NEW AIRCRAFT
C      INITIALIZE AIRCRAFT START TIME
320  SSTIME = STIME
C      INITIALIZE AIRCRAFT SUBSET NUMBER
C      SSMI = 1
C      SAVE PREVIOUS TAIL NUMBER
C      PTN = SGSN
C      CHECK IF TAILNUMBER SUBSET EXIST
C      IF (SGSN - SSTNO) 331,332,330
C      +-----+-----+-----+-----+-----+-----+-----+-----+-----+
C      ENTER HERE FOR BEGINNING OF AIRCRAFT SUBSET
C      UPDATE AIRCRAFT SUBSET NUMBER
325  SSN = SSMI + 1
C      INITIALIZE AIRCRAFT SUBSET START TIME
C      SSTIME = SSSWK
C      READ IN SUBSET INFORMATION
C      330 READ (IN,35) SSTN,SSSWK
C      35  FORMAT (2I10,A4)
C      330 CALL CREADI
C      I (IN,IT,SSTNO,SSSWK,DUMMY)
C      CHECK FOR CHANGE IN TAIL NUMBER
C      IF (SGSN - SSTNO) 331,332,320
C      INITIALIZE AIRCRAFT END TIME

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331 SETIME = ETIME
GO TO 340
C SET END TIME OF SUBSET
332 SETIME = SSSWK
C CHECK WEEK NUMBER AGAINST STARTING WEEK
340 IF (SGWK - SSETIME) 345,349,349
C HEAD A SUPPORT GENERAL RECORD FROM THE DATA BANK VIA COBOL ON SGP
345 TYPE = 1
CALL CDB1
C CHECK BLOCKING FLAG
IF (SGSN = 99999999) 347,10200,347
C CHECK FOR END OF INFORMATION (EOF)
347 IF (SGEOF) 10200,340,10200
C -----
C CHECK FOR CHANGE IN TAIL NUMBER
349 IF (SGSN - PTN) 3,0,350,320
C CHECK IF A SUBSET EXISTS
350 IF (SGSN - SSTN) 352,351,320
C CHECK ENUTIME
351 IF (SLTIME = SGWK, 325,325,360
C CHECK ENUTIME
352 IF (SLTIME = SGWK) 345,345,360
C FIND NEXT LEGAL SGWUC
360 CALL FLSG1
RETURN
10200 CONTINUE
WRITE (6,10210)
10210 FORMAT (13H SGEOF STOP2 )
IT1 = 0
CALL CLOSIF (IT1)
CALL LOJMSG
CALL LXIT
END
SUBROUTINE FLSG1
C THIS SUBROUTINE FINDS A LEGAL SGWUC
C COMMON SECTION
C -----
COMMON AIE,BLANK,BSGC,CBSGI,C1,CNORM,CSGN,CTYPE,CWK,DCT,DDN,
1 DFH,DICT,DIFH,DIL,DIS,DL,DS,DUMMY,DWK,ENSGWK,ESGWK,ETIME,ETN,HMC,
2 ID,IN,IT,IWAY,NNSG,NORS,NSGBC,NSGCFH,NSGCL,NSGCS,NSGEOF,NSGF,
3 NSGHR,NSGN,NSGNOM,NSGSN,NSGU,NSGWK,NSGWUC,OAIE,OFIE1,OUT,PDATA,
4 PIDATA ,PNSGWK,PPI,PS,PSGCFH,PSGCL,PSGCS,PSGDL,PSGI,PSOK,PSOL,
5 PSGWK,PTN,PWKI,SFTIME,SGCFH,SGCL,SGCS,SGEOF,SGF,SGFH,SGHR,SQL,
6 SGNI,SGNORM,SGPI,SGSN,SGU,SGWK,SGWUC,SSN,SSWK,SSTIME,SSTNO,
7STIME,STN,TYPE,WDL
C DIMENSION SECTION
C -----
DIMENSION CNOHM(2),CWK(3),NSGWUC(4),PDATA(4),PIDATA(4),
1 PWKI(3),SGNI(2),SGWUC(4)
DIMENSION BSGC(4,?)
C TYPE SPECIFICATION SECTION
C -----
INTEGER AIE,BLANK,BSGC,CBSGI,C1,CNORM,CSGN,CTYPE,CWK,DCT,DDN,
1 DFH,DICT,DIFH,DIL,DIS,DL,DS,DUMMY,DWK,ENSGWK,ESGWK,ETIME,ETN,HMC,
2 ID,IN,IT,IWAY,NNSG,NORS,NSGBC,NSGCFH,NSGCL,NSGCS,NSGEOF,NSGF,
3 NSGHR,NSGN,NSGNOM,NSGSN,NSGU,NSGWK,NSGWUC,OAIE,OFIE1,OUT,PDATA,
4 PIDATA ,PNSGWK,PPI,PS,PSGCFH,PSGCL,PSGCS,PSGDL,PSGI,PSOK,PSOL,
5 PSGWK,PTN,PWKI,SFTIME,SGCFH,SGCL,SGCS,SGEOF,SGF,SGFH,SGHR,SQL,
6 SGNI,SGNORM,SGPI,SGSN,SGU,SGWK,SGWUC,SSN,SSWK,SSTIME,SSTNO,
7STIME,STN,TYPE,WDL
C -----
360 GO 369 C1SGI = 1,NSGBC
C CHECK ALL CHARACTERS OF SGWUC
GO 365 1=1,4
IF (BSGC(1,CBSGI) = SGWUC(1)) 362,365,362
362 IF (BSGC(1,CBSGI) = BLANK) 369,410,369
365 CONTINUE
GO TO 410
369 CONTINUE
ENTRY FNLSG1
TYPE = 1
HEAD A SG RECORD
CALL CDB1
C CHECK TAIL NUMBER AGAINST 99999999 PADDING OF LAST LAST BLOCK
IF (SGSN = 99999999) 375,405,375
C CHECK FOR EOF
375 IF (SGEOF) 400,360,400

```

```

C   SET TAIL NUMBER TO 99999999
400 SG5N = 99999999
405 C5G1 = (SG5N + 1
410 CONTINUE
    CI = C5G1
    RETURN
    END
    SUBROUTINE FLSGI
C   THIS SUBROUTINE FINDS THE END OF THE CURRENT INSPECTION AND
C   SUMS UP THE NORM HOURS
C   COMMON SECTION
C
C   *****
COMMON      AIE,RL,NK,RSGL,CBSGI,CI,CNORM,CSGN,CTYPE,CWK,DCT,DDN,
1  DFH,DICT,DIFH,DII,DIS,DL,DS,DUMMY,DWK,ENSGWK,ESGWK,ETIME,ETN,HMC,
2  ID,IN,IT,IWAY,NNSG,NORS,NSGBC,NSGCFH,NSGCL,NSGCS,NSGEOF,NSGF,
3  NSGHR,NSGN,NSGNOM,NSGSN,NSGU,NSGWK,NSGWUC,OAIE,OF1E1,OUT,PDATA,
4  PIDATA ,PNSGWK,PI,PS,PSGCFH,PSGCL,PSGCS,PSGDL,PSGI,PSOK,PSOL,
5  PSGWK,PTN,PWKI,SETIME,SGCFH,SGCL,SGCS,SGEOF,SGF,SGFH,SGHR,SQL,
6  SGN,SGNORM,SGPI,SGSN,SGU,SGWK,SGWUC,SSN,SSSWK,SSTIME,SSTNO,
7  TIME,STN,TYPE,WDL
C   DIMENSION SECTION
C   *****
DIMENSION   CNORM(2),CWK(3),NSGWUC(4),PDATA(4),PIDATA(4),
1  PWK(3),SGH(2),GWUC(4)
DIMENSION   USGC(4,*)
C   TYPE SPECIFICATION SECTION
C   *****
INTEGER     AIE,RL,NK,RSGL,CBSGI,CI,CNORM,CSGN,CTYPE,CWK,DCT,DDN,
1  DFH,DICT,DIFH,DII,DIS,DL,DS,DUMMY,DWK,ENSGWK,ESGWK,ETIME,ETN,HMC,
2  ID,IN,IT,IWAY,NNSG,NORS,NSGBC,NSGCFH,NSGCL,NSGCS,NSGEOF,NSGF,
3  NSGHR,NSGN,NSGNOM,NSGSN,NSGU,NSGWK,NSGWUC,OAIE,OF1E1,OUT,PDATA,
4  PIDATA ,PNSGWK,PI,PS,PSGCFH,PSGCL,PSGCS,PSGDL,PSGI,PSOK,PSOL,
5  PSGWK,PTN,PWKI,SETIME,SGCFH,SGCL,SGCS,SGEOF,SGF,SGFH,SGHR,SQL,
6  SGN,SGNORM,SGPI,SGSN,SGU,SGWK,SGWUC,SSN,SSSWK,SSTIME,SSTNO,
7  TIME,STN,TYPE,WDL
C   *****
C   INITIALIZE CURRENT WEEK INDICES
10 DO 15 I=1,NSGRC
    CWK(I) = -1
15 CONTINUE
C   INITIALIZE SUM OF NORM HOURS
    CNORM(1) = 0
    CNORM(2) = 0
C   SAVE LAST SG RECORD INFORMATION
20 PSGWK = SGWK
    PSGCFH = SGCFH
    PSGCS = SGCS
    PSGCL = SGCL
    CWK(1) = SGWK
C   CHECK TO SEE IF NORM HOURS EXIT
    IF (CI = SGN(1)) 60,50,60
50 CNORM(1) = CNORM(1) + SGNORM
    GO TO 80
60 IF (CI = SGN(2)) 80,70,80
70 CNORM(2) = CNORM(2) + SGNORM
C   FIND NEXT LEGAL S WUC
80 CALL FNL5GI
    IF (SGWK = SETIME) 85,300,300
85 IF (PTN = SGN(100,88,300)
C   CALCULATE DIFFERENCE IN WEEK FIELD FOR CONSECUTIVE SG RECORDS
88 UNK = SGWK - PSGWK
C   CHECK FOR CHANGE IN WEEK
    IF (DWK) 300,20,90
C   IS PREVIOUS SG INLEX = 3(3400),
90 IF (PSGI-3) 95,100,95
C   IS DIFF. IN WEEKS MORE THAN 2,
95 IF (UNK-3) 20,200,200
C   IS DIFF. IN WEEKS MORE THAN 4.
100 IF (UNK-5) 20,200,200
C   CHECK CWK
200 DO 240 I=1,NSGRC
    IF (CWK(I)) 240,200,210
210 IF (CWK(I) - PSGWK) 230,240,230
230 CWK(I) = -1
240 CONTINUE
    ESGWK = PSGWK
    RETURN
300 CONTINUE
    IF (CI = SGN(1)) 360,350,360
350 CNORM(1) = CNORM(1) + SGNORM
    GO TO 380
360 IF (CI = SGN(2)) 380,370,380
370 CNORM(2) = CNORM(2) + SGNORM
380 ESGWK = SETIME + 1
    RETURN
    END

```

```

SUBROUTINE FLNSG1
C THIS FINDS LEGAL NSG RECORD TYPE 3
C COMMON SECTION
C COMMON AIE,BLANK,BSGC,CBSGI,CI,CNORM,CSGN,CTYPE,CWK,DCT,DDN,
1 DFH,DICI,DIFH,DIL,DIS,DL,DS,DUMMY,DWK,ENSGWK,ESGWK,ETIME,ETN,HMC,
2 ID,IN,IT,IWAY,NNSG,NORS,NSGBC,NSGCFH,NSGCL,NSGCS,NSGEOF,NSGF,
3 NSGHR,NSGN,NSGNOM,NSGSN,NSGU,NSGWK,NSGWUC,OAIE,OFIL1,OUT,PDATA,
4 PIUATA ,PNSGWK,PPI,PS,PSGCFH,PSGCL,PSGCS,PSGDL,PSGI,PSGK,PSGL,
5 PSGWK,PTN,PWKI,SETIME,SGCFH,SGCL,SGCS,SGEOF,SGF,SGFH,SGHR,SGL,
6 SGN1,SGNOM,SGPI,SGSN,SGU,SGWK,SGWUC,SSN,SSSWK,SSTIME,SSTNO,
7STIME,STN,TYPE,WDC
C -----
C DIMENSION SECTION
C DIMENSION CNORM(2),CWK(3),NSGWUC(4),PDATA(4),PIDATA(4),
1 PWKI(3),SGNI(2),SGWUC(4)
C DIMENSION BSGC(4,3)
C TYPE SPECIFICATION SECTION
C -----
C INTEGER AIE,BLANK,BSGC,CBSGI,CI,CNORM,CSGN,CTYPE,CWK,DCT,DDN,
1 DFH,DICI,DIFH,DIL,DIS,DL,DS,DUMMY,DWK,ENSGWK,ESGWK,ETIME,ETN,HMC,
2 ID,IN,IT,IWAY,NNSG,NORS,NSGBC,NSGCFH,NSGCL,NSGCS,NSGEOF,NSGF,
3 NSGHR,NSGN,NSGNOM,NSGSN,NSGU,NSGWK,NSGWUC,OAIE,OFIL1,OUT,PDATA,
4 PIUATA ,PNSGWK,PPI,PS,PSGCFH,PSGCL,PSGCS,PSGDL,PSGI,PSGK,PSGL,
5 PSGWK,PTN,PWKI,SETIME,SGCFH,SGCL,SGCS,SGEOF,SGF,SGFH,SGHR,SGL,
6 SGN1,SGNOM,SGPI,SGSN,SGU,SGWK,SGWUC,SSN,SSSWK,SSTIME,SSTNO,
7STIME,STN,TYPE,WDC
C -----
C CHECK BLOCKING FLAG
350 IF (NSGSN = 99999999) 355,805,355
C CHECK FOR END OF INFORMATION
355 IF (NSGEOF) 800,360,800
C CHECK FOR TYPE 3 RECORD
360 IF (CTYPE = 3) 370,380,370
370 TYPE = 2
CALL CDRI
GO TO 350
C CHECK FOR CHANGE IN TAIL NUMBER
380 IF (NSGSN = PTN) 370,390,805
C CHECK WEEK FOR PASS END OF CURRENT SG
390 IF (NSGWK = LSGWK) 370,370,400
C CHECK WEEK BEFORE THE START OF NEXT INSPECTION
400 IF (NSGWK = SGWK) 410,410,810
C FIND OBSERVATION DATA AND OUTPUT SAME
410 CALL VARJTB
SAVE PREVIOUS WEEK
PNSGWK = NSGWK
PS = NSGCS
C HEAD A NON-SUPPORT GENERAL RECORD
TYPE = 2
420 CALL CDRI
C CHECK FOR CHANGE IN TAIL NUMBER
IF (NSGSN = PTN) 810,430,810
C CHECK FOR CHANGE 1.1 WEEK
430 IF (PNSGWK = NSGWK) 440,420,440
C CHECK FOR TYPE 3 RECORD
440 IF (CTYPE = 3) 420,400,420
800 NSGSN = 99999999
805 ENSGWK = SETIME + 1
810 CONTINUE
RETURN
END
SUBROUTINE VARI
C THIS SUBROUTINE CALCULATES THE FIRST 6 DEPENDENT VARIABLES
C COMMON SECTION
C -----
C COMMON AIE,BLANK,BSGC,CBSGI,CI,CNORM,CSGN,CTYPE,CWK,DCT,DDN,
1 DFH,DICI,DIFH,DIL,DIS,DL,DS,DUMMY,DWK,ENSGWK,ESGWK,ETIME,ETN,HMC,
2 ID,IN,IT,IWAY,NNSG,NORS,NSGBC,NSGCFH,NSGCL,NSGCS,NSGEOF,NSGF,
3 NSGHR,NSGN,NSGNOM,NSGSN,NSGU,NSGWK,NSGWUC,OAIE,OFIL1,OUT,PDATA,
4 PIUATA ,PNSGWK,PPI,PS,PSGCFH,PSGCL,PSGCS,PSGDL,PSGI,PSGK,PSGL,
5 PSGWK,PTN,PWKI,SETIME,SGCFH,SGCL,SGCS,SGEOF,SGF,SGFH,SGHR,SGL,
6 SGN1,SGNOM,SGPI,SGSN,SGU,SGWK,SGWUC,SSN,SSSWK,SSTIME,SSTNO,
7STIME,STN,TYPE,WDC
C DIMENSION SECTION
C DIMENSION CNORM(2),CWK(3),NSGWUC(4),PDATA(4),PIDATA(4),
1 PWKI(3),SGNI(2),SGWUC(4)
C DIMENSION BSGC(4,3)
C TYPE SPECIFICATION SECTION

```

```

C      -----
      INTEGER      AIE,BLANK,BSGC,CBSGI,CI,CNORM,CSGN,CTYPE,CWK,DCT,DDN,
1  DFH,DICT,DIFH,DIL,DIS,DL,DS,DUMMY,OWK,ENSGWK,ESGWK,ETIME,ETN,HMC,
2  ID,IN,IT,IWAY,NN,NS,NORS,NSGBC,NSGCFH,NSGCL,NSGCS,NSGEOF,NSGF,
3  NSGHW,NSGN,NSGNOM,NSGSN,NSGU,NSGWK,NSGWUC,OAIE,OFLEI,OUT,PDATA,
4  PIDATA,PI,PSGWK,PPI,PS,PSGCFH,PSGCL,PSGCS,PSGDL,PSGI,PSOK,PSOL,
5  PSGWK,PTN,PWKI,SLTIME,SGCFH,SGCL,SGCS,SGEOF,SGF,SGFH,SGHR,SQL,
6  SGN,SGNOM,SGPI,SGSN,SGU,SGWK,SGWUC,SSN,SSWK,SSTIME,SSTHO,
7  STIME,STN,TYPE,WUC
      ENTRY VAR12
C      SAVE TAIL NUMBER
      IPTN = PTN
C      ZERO OUT PREVIOUS TAIL NUMBER
      PTN = 0
      UCT = (PSGWK - PDATA(1)) * 10
      DFH = PSGCFH - PDATA(2)
      US = (PSGCS - PDATA(3)) * 10
      DL = (PSGCL - PDATA(4)) * 10
      DO 600 I=1,NSNG
C      CHECK IF NORM DATA EXISTS
      K=SGNI(I)
      IF (CWK(K)) GOO,GOO,100
100  DO 590 J=1,NSGBH
      IF (PWK(J)) 590,590,400
C      OUTPUT OBSERVATIONS
      400 DDN = 10
      CSGN = CNORM(I)
C      CALCULATE ID FOR OUTPUT
      ID = 10000 * SSN + 100 * I + 10 * J + 1
      CALL COROUT
      * (PTN,ID,CSGN,DDN,DCT)
C 490 FORMAT (2X,10,416)
C      CALCULATE ID FOR CJPUT
      ID = 10000 * SSN + 100 * I + 10 * J + 2
      CALL COROUT
      * (PTN,ID,CSGN,DDN,DFH)
C      WRITE (OTAPE1,490) PTN,ID,CSGN,DDN,DFH
C      CALCULATE ID FOR OUTPUT
      ID = 10000 * SSN + 100 * I + 10 * J + 3
      CALL COROUT
      * (PTN,ID,CSGN,DDN,DS)
C      WRITE (OTAPE1,490) PTN,ID,CSGN,DDN,DS
C      CALCULATE ID FOR OUTPUT
      ID = 10000 * SSN + 100 * I + 10 * J + 4
      CALL COROUT
      * (PTN,ID,CSGN,DDN,DL)
C      WRITE (OTAPE1,490) PTN,ID,CSGN,DDN,DL
590 CONTINUE
600 CONTINUE
      PDATA(1) = PSGWK
      PDATA(2) = PSGCFH
      PDATA(3) = PSGCS
      PDATA(4) = PSGCL
C      SET UP NEW ORIGIN
      DO 800 I=1,NSGMC
      PWK(I) = CWK(I)
800 CONTINUE
C      RESTORE TAIL NUMBER
      PTN = IPTN
      RETURN
      ENTRY VAR36
C      SAVE TAIL NUMBER
      IPTN = PTN
C      ZERO OUT PREVIOUS TAIL NUMBER
      PTN = 0
      DICT = (NSGWK - FIDATA(1)) * 10
      DIFH = NSGCFH - FIDATA(2)
      DIS = (NSGCS - FIDATA(3)) * 10
      DIL = (NSGCL - FIDATA(4)) * 10
      US = (NSGCS - PS) * 10
      IF (US) 900,900,850
850 CONTINUE
      OAIE = 10 * AIE
      DDN = DS

```



```

C      CALCULATE ID FOR OUTPUT
      ID = 10000 * SSN + 300 + 10 * SGPI + 1
      CALL COROUT
      * ( PTN, ID, 0, IE, DDN, DICT)
C      CALCULATE ID FOR OUTPUT
      ID = 10000 * SSN + 300 + 10 * SGPI + 2
      CALL COROUT
      * ( PTN, ID, 0, AIE, DDN, DIFH)
C      CALCULATE ID FOR OUTPUT
      ID = 10000 * SSN + 300 + 10 * SGPI + 3
      CALL COROUT
      * ( PTN, ID, 0, AIE, DDN, DIS)
C      CALCULATE ID FOR OUTPUT
      ID = 10000 * SSN + 300 + 10 * SGPI + 4
      CALL COROUT
      * ( PTN, ID, 0, AIE, DDN, DIL)
900 IF (UIC) 1000, 1000, 950
C      CALCULATE ID FOR OUTPUT
950 CONTINUE
      ID = 10000 * SSN + 400 + 10 * SGPI + 2
      CALL COROUT
      * ( PTN, ID, 0, FM, DICT, DIFH)
C      CALCULATE ID FOR OUTPUT
      ID = 10000 * SSN + 500 + 10 * SGPI + 3
      CALL COROUT
      * ( PTN, ID, 0, S, UIC, DIS)
C      CALCULATE ID FOR OUTPUT
      ID = 10000 * SSN + 600 + 10 * SGPI + 4
      CALL COROUT
      * ( PTN, ID, 0, UIL, DICT, DIL)
C      RESTORE TAIL NUMBER
1000 CONTINUE
      PTN = IPIN
      RETURN
      END

/*      REQUIRED PLACE FORTRAN OLD SOURCE BEFORE THIS CARD
//LKED, AUDCALL DU USN>PGMLIR, DISP>SHR, VOL>SER>T11, UNIT>DSK
//LKED, SYSIN DU DATA, SPACE>[TRK, [5, 5]]
INCLUDE AUDCALL(8777)
/*      REQUIRED PLACE LINKUIT CONTROL CARDS IF ANY BEFORE THIS CARD
//CHG, FT01F001 DU DISP>[PASS], UNIT>[A+F1, 2, DEFER], DSN>A, 9897419, CT12/13 1
//      VOL>SER>[F1, A+F1, H+F1, C+F1, D+F1, E+F1, F+F1, G+F1, H+F1, CT12 2
//      I+F1, J+F1, K+F1, L+F1, M+F1, N+F1, O+F1, P+F1, Q+F1, R+F1, S+F1] T12 3
//      //
//CHG, FT03F001 DU DISP>[PASS], UNIT>[T+F3, 1, DEFER], DSN>C, 9897418, CT14 1
//      VOL>SER>[F3, A+F3, B+F3, C+F3, D+F3, E+F3, F+F3, G+F3, H+F3, CT14 2
//      I+F3, J+F3, K+F3, L+F3, M+F3, N+F3, O+F3, P+F3, Q+F3, R+F3, S+F3] T14 3
//      //
//CHG, FT04F001 DU USN>P, 9897415, DISP>[OLD, PASS] O15-IN
//CHG, FT08F001 DU DISP>[PASS], UNIT>[A+F5, 2, DEFER], DSN>E, 9897412, CT22/23 1
//      VOL>SER>[F5, A+F5, B+F5, C+F5, D+F5, E+F5, F+F5, G+F5, H+F5, CT22 2
//      I+F5, J+F5, K+F5, L+F5, M+F5, N+F5, O+F5, P+F5, Q+F5, R+F5, S+F5] T22 3
//      //
//CHG, FT11F001 DU DSN>P, 9897413, DISP>[PASS], SPACE>[CYL, [009, 001]] O25-OUT
//
//C9897U EXEC C960JN, TT>E>02, ACCT>D35323007 STDALONE JOHN LINK
//CHG, TU12 DU DISP>[KEEP], UNIT>[A+F1, 2, DEFER], DSN>A, 9897419, CT12/13 1
//      VOL>SER>[F1, A+F1, H+F1, C+F1, D+F1, E+F1, F+F1, G+F1, H+F1, CT12 2
//      I+F1, J+F1, K+F1, L+F1, M+F1, N+F1, O+F1, P+F1, Q+F1, R+F1, S+F1] T12 3
//      //
//CHG, TU14 DU DISP>[KEEP], UNIT>[T+F3, 1, DEFER], DSN>C, 9897418, CT14 1
//      VOL>SER>[F3, A+F3, B+F3, C+F3, D+F3, E+F3, F+F3, G+F3, H+F3, CT14 2
//      I+F3, J+F3, K+F3, L+F3, M+F3, N+F3, O+F3, P+F3, Q+F3, R+F3, S+F3] T14 3
//      //
//CHG, TU15 DU USN>P, 9897415, DISP>[OLD, DELETE] O15-IN

//CHG, TU22 DU DISP>[KEEP], UNIT>[T+F5, 1, DEFER], DSN>E, 9897412, CT22 1
//      VOL>SER>[F5, A+F5, B+F5, C+F5, D+F5, E+F5, F+F5, G+F5, H+F5, CT22 2
//      I+F5, J+F5, K+F5, L+F5, M+F5, N+F5, O+F5, P+F5, Q+F5, R+F5, S+F5] T22 3
//      //
//CHG, TU25 DU USN>P, 9897413, DISP>[OLD, DELETE] O25-IN
//CHG, TPRIN DU *SFICE>[TRK, [1, 1]]
I/P TU15 1040080208
T/P TU25 1040080208
T/P TU22 1002040204
T/P TU14 1002070207
T/P TU12 1002070207
/*      PLACE T/P CONTROL CARDS BEFORE THIS CARD

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# 6.10.2 MEASURE OBSERVATIONS AT WUC LEVEL

//T98978A JOR	01:J. FOUNTAIN	:PRTY>02, TYPRONHOLD	X131	
//C98978 EXEC	C9601N, T:ME>02, ACCT>035323007	STAND ALONE T#0		
//CHG, IU15	DU DSK>+P.9897415, DISP>[ ,PASS], SPACE>[CYL, [009,001]]			D15-OUT
//CHG, TFG1N	DU *,SPACE>[CYL, [1,1]]			
00000	GET TFG	WANG		C98970*Y
010001 019999	REPLACE			'T
TFG TU15	11 01020:0			
100	500			STIME
57000231	57000232			STN-ETN
3	2			NSGBC
		03300		HPH
		033		MA1
		03400		PERI
111	2			
3	11			HPF
		03300		MA
		033		PER
		03400		
		74A		
		74B		
		74C		
		74D		
		74F		
		74H		
		74K		
		74L		
		74P		
		74Q		
		74000		
101	1			GRP1D 1
2	43			
		03300		HPF
		03400		PER
		11J		HPO PMN
		11K		HPO PMN
		11		HPO PMN
		12B		HPO PMN
		12		HPO PMN
		13C		HPO PMN
		13J		HPO PMN
		13		HPO PMN
		14		HPO PMN
		23K		HPO PMN
		23M		HPO PMN
		23N		HPO PMN
		23Q		HPO PMN
		23S		HPO PMN
		23		HPO PMN
		41F		HPO PMN
		41		HPO PMN
		42E		HPO PMN
		42F		HPO PMN
		42G		HPO PMN
		42		HPO PMN
		44		HPO PMN
		45E		HPO PMN
		45J		HPO PMN
		45		HPO PMN
		46A		HPO PMN
		46C		HPO PMN
		46G		HPO PMN
		46H		HPO PMN
		46J		HPO PMN
		46		HPO PMN
		47		HPO PMN
		49A		HPO PMN
		49		HPO PMN
		51		HPO PMN
		52		HPO PMN
		55		HPO PMN
		63		HPO PMN
		65		HPO PMN
		71		HPO PMN
		75		HPO PMN
		93		HPO PMN
		97		HPO PMN

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C      FORTRAN-CORO' LINK TEST,  JOHN LINK.
C      THIS DRIVER CALCULATES OBSERVATIONS FOR GROUPS 7 - 17
C      THIS PROGRAM GENERATE OBSERVATION DATA TAPES FOR FUTURE ANALYSIS
C      READ IN CARD INPUT DESCRIPTION FOR GROUPS 7-17
C      OBSERVATION TAPE FOR WUC LEVEL
C
C      COLUMN      VALUE      DESCRIPTION
C      3-7         07111      03300, 033XX, 03400 ORIGIN
C                   00101      03300, 03600 ORIGIN
C      8-10        1          WUC SET NUMBER
C      11          1          CURRENT INSPECTION - HPF
C                   2          CURRENT INSPECTION - MA
C                   3          CURRENT INSPECTION - PERIODIC
C      12          1          NON-ISO
C                   2          ISO
C      13-14       07        UNSCHEDULED MA / WEEK
C                   08        UNSCHEDULED MA / FLIGHT HOUR
C                   09        UNSCHEDULED MA / SORTIE
C                   10        UNSCHEDULED MA / LANDING
C                   10        REPAIR ACTION / INTERVAL
C                   20        AHOOT MA /SORTIE
C      15          1          ORIGINS - HOURLY POSTFLIGHT
C                   2          ORIGINS - MA
C                   3          ORIGINS - PERIODIC
C
C      16          1          INDEPENDENT VARIABLE - WEEK
C                   2          INDEPENDENT VARIABLE - FLIGHT HOURS
C                   3          INDEPENDENT VARIABLE - SORTIE
C                   4          INDEPENDENT VARIABLE - LANDING
C      18-23       18-23     NUMERATOR OF DEPENDENT VARIABLE
C      25-30       25-30     DENOMINATOR OF DEPENDENT VARIABLE
C      32-37       32-37     INDEPENDENT VARIABLE
C      COMMON SECTION

```

```

C .....
COMMON AIE,HLANK,BSGC,CBSG1,C1,CNORM,CSGN,CTYPE,CWK,DCT,DON,
1 DFH,DICT,UIFH,LIL,DIS,DL,DS,DUMMY,DWK,ENSGWK,ESGWK,ETIME,ETN,HMC,
2 IU,IN,IT,IWAY,INSG,NORS,NSGBC,NSGCFH,NSGCL,NSGCS,NSGEOF,NSGF,
3 NSGHR,NSGN,NSGNOM,NSGSN,NSGU,NSGWK,NSGWUC,OAIE,OFIE1,OUT,PDATA,
4 PIJATA,PSGWK,PPI,PS,PSGCFH,PSGCL,PSGCS,PSGDL,PSGI,PSGK,PSGL,
5 PSGWK,PIN,PPI,SETIME,SGCFH,SGCL,SGCS,SGEOF,SGF,SGFH,SGHR,SGL,
6 SGN1,SGNOM,SGI,SGSN,SGU,SGWK,SGWUC,SSN,SSSWK,SSTIME,SSTNO,
7STIME,STI,TYPE,WDC
COMMON UNSG,CMA,CUMA,DVD,GRPID,GRPSEQ,ID2,IUENT,IEND,IGRP,
1 IMAT,IMAX,ISEI,ISTAH,ITIME,IV,NENSGG,NESG,NSET,NWDC,NWUCGP,PDATA2
2,PNSGCF,PNSGCL,PNSGCS,WDCD
COMMON IP(7)
COMMON IDA
C DIMENSION SECTION
C .....
DIMENSION CNORM(2),CWK(3),NSGWUC(4),PDATA(4),PIDATA(4),
1 PWK1(3),SGI(2),SGWUC(4)
DIMENSION USG(4,3)
DIMENSION CMA(200),DVD(4),IDA(4),IMAT(3,7),NENSGG(7),
1 PDATA2(4,3),WDCU(9)
DIMENSION UNSG(4,200)
DIMENSION GRPID(7),GRPSEQ(7)
C TYPE SPECIFICATION SECTION
C .....
INTEGER AIE,HLANK,BSGC,CBSG1,C1,CNORM,CSGN,CTYPE,CWK,DCT,DON,
1 DFH,DICT,UIFH,LIL,DIS,DL,DS,DUMMY,DWK,ENSGWK,ESGWK,ETIME,ETN,HMC,
2 IU,IN,IT,IWAY,INSG,NORS,NSGBC,NSGCFH,NSGCL,NSGCS,NSGEOF,NSGF,
3 NSGHR,NSGN,NSGNOM,NSGSN,NSGU,NSGWK,NSGWUC,OAIE,OFIE1,OUT,PDATA,
4 PIJATA,PSGWK,PPI,PS,PSGCFH,PSGCL,PSGCS,PSGDL,PSGI,PSGK,PSGL,
5 PSGWK,PIN,PPI,SETIME,SGCFH,SGCL,SGCS,SGEOF,SGF,SGFH,SGHR,SGL,
6 SGN1,SGNOM,SGI,SGSN,SGU,SGWK,SGWUC,SSN,SSSWK,SSTIME,SSTNO,
7STIME,STI,TYPE,WDC
INTEGER UNSG,CMA,CUMA,DVD,GRPID,GRPSEQ,ID2,IUENT,IEND,IGRP,
1 IMAT,IMAX,ISEI,ISTAH,ITIME,IV,NENSGG,NESG,NSET,NWDC,NWUCGP,PDATA2
2,PNSGCF,PNSGCL,PNSGCS,WDCD
C .....
COMMON CA(200),CHA(200),PS2
INTEGER CA,CHA,PS2
COMMON ABUK1(2),WDC1(3)
INTEGER ABUK1,WDC1
COMMON ISW1
COMMON IPI
C READ IN CARD INPUT DESCRIPTIONS FOR GROUPS 7-10
CALL CIP2
C .....
C POSITION THE SGWUC FILE FOR THE FIRST TIME ONLY
C HEAD A SUPPORT GENERAL RECORD FROM THE DATA BANK VIA CGBOL ON SGP
TYPE = 1
300 CALL COR2
C CHECK TAIL NUMBER AGAINST 99999999 ERROR
IF (SGSN = 9999999) 305,10000,305
C CHECK FOR END OF FILE ERROR
305 IF (SGEOF) 10000,310,10000
C CHECK TAIL NUMBER AGAINST STARTING TAIL NUMBER
310 IF (SGSN = SIN) 300,320,320
C HEAD A NON-SUPPORT GENERAL RECORD FOR FIRST TIME
320 TYPE = 2
CALL COR2
C CHECK TAIL NUMBER AGAINST 99999999 ERROR
IF (NSGSN = 9999999) 325,10000,325
C CHECK FOR END OF FILE ERROR
325 IF (NSGEOF) 10000,330,10000
C POSITION THE SG FILE
330 CALL SGPOS2
C FIND END OF INITIAL INSPECTION
C FIND END OF CURRENT INSPECTION
335 CALL FESG2
C SAVE REQUIRED DATA FROM THE SG RECORD
IF (PSGI) 340,340,337
337 CONTINUE
CALL VIB
ISW1 = 1
340 PDA(A2(1),IPI) = PSGWK
PDA(A2(2),IPI) = PSGCFH
PDA(A2(3),IPI) = PSGCS
PDA(A2(4),IPI) = PSGCL
PS2 = PSGCS
PSGI = IPI
ISTAH = 0
IEND = 0
DO 500 I=1,NWUCGP
ISTAH = IEND + 1
IEND = IEND + NENSGG(I)
C CHECK TO SEE IF INSPECTION BELONG TO THE WUC GROUP
IF (IMAT(IPI)) 500,500,400
400 CONTINUE

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C      SAVE INSPECTION INDEX TO CURRENT INDEX
      IPI(I) = IPI
C      INITIALIZE CUMULATIVE MAINTENANCE ACTIONS TO ZERO
      DO 400 J=1,IAH,IEND
      CMA(J) = 0
      CRA(J) = 0
      CA(J) = 0
400    CONTINUE
500    CONTINUE
C      CALCULATE GROUPS 7,8,9,10
805    CALL FLNSG2
C      CHECK FOR CHANGE IN TAIL NUMBER
      IF (PTN - SSGN) 1000,920,1000
420    IF (PTN - NSGSH) 1000,930,1000
C      CHECK FOR END OF TIME
930    IF (SETIME - SSGWK) 1100,950,950
950    IF (SETIME - NSGWK) 1100,335,335
C      TEST TAIL NUMBER AGAINST BLOCKING FLAG
C      TEST FOR END OF INFORMATION FLAG
1000   IF (SSGN - 99999999) 1010,11000,11000
1010   IF (NSGSH - 99999999) 1020,11000,11000
C      CHECK FOR LAST TAIL NUMBER
1020   IF (NSGSH - ETI) 1030,1030,11000
1030   IF (SSGN - LTM) 1040,1040,11000
1040   IWAY = 1
      GO TO 330
1100   IWAY = 2
      GO TO 330
10000  CONTINUE
      WRITE (6,10010)
10010  FORMAT (7H STOP 1)
      GO TO 11010
11000  CONTINUE
      WRITE (6,11005)
11005  FORMAT (7H STOP 4)
11010  CONTINUE
      ITI = 0
      CALL CLOSEF (ITI)
      CALL EQUJSG
      CALL EXIT
      END
SUBROUTINE C1M2
C      THIS SUBROUTINE READS IN THE MODEL DEFINITION FOR VARIABLES 7-17
C      ALSO BASIC INITIALIZATION
C      COMMON SECTION
C      *****
COMMON      AIL,BLANK,BSGC,CHSGI,C1,CNORM,CSGN,CTYPE,CWK,DCT,DDN,
1  DFH,DICT,UIF,DIL,DIS,DL,DS,DUMMY,DWK,ENSGWK,ESGWK,ETIME,ETN,HMC,
2  ID,IN,IT,IWAY,NNSG,NOHS,NSGBC,NSGCFH,NSGCL,NSGCS,NSGEOF,NSGF,
3  NSGHR,NSGN,NJGNM,NSGSN,NSGU,NSGWK,NSGWUC,OAIE,OFLE1,OUT,PDATA,
4  PIUATA,PSJGWK,PP1,PS,PSGCFH,PSGCL,PSGCS,PSGDL,PSGI,PSOK,PSGL,
5  PSWK,PIN,PAI,SETIME,SGCFH,SGCL,SGCS,SGEOF,SGF,SGFH,SGHR,SQL,
6  SGN1,SGNOM,SGPI,SGSN,SGU,SGWK,SGWUC,SSN,SSSWK,SSTIME,SSTNO,
7  STIME,STN,TYPE,WDC
COMMON      BMSG,CMA,CUMA,DVD,GRPID,GRPSEQ,ID2,IUENT,IEND,IORP,
1  IMAT,IMAX,ISE1,ISTAN,ITIME,IV,NENSGG,NESG,NSET,NWDC,NWUCOP,PDATA2
2,PNSGCF,PNSGCL,PNSGCS,WDCD
COMMON      IP(7)
COMMON      IUA
C      DIMENSION SECTION
C      *****
DIMENSION      CNORM(2),CWK(3),NSGWUC(4),PDATA(4),PIDATA(4),
1  PWK(3),SGU(2),SGWUC(4)
DIMENSION      BSGC(4,3)
DIMENSION      CMA(200),DVD(4),IDA(4),IMAT(3,7),NENSGG(7),
1  PDATA2(4,3),WDCU(9)
DIMENSION      BMSG(4,200)
DIMENSION      GRPID(7),GRPSEQ(7)
C      *****
C      TYPE SPECIFICATION SECTION
C      *****
INTEGER      AIL,BLANK,BSGC,CHSGI,C1,CNORM,CSGN,CTYPE,CWK,DCT,DDN,
1  DFH,DICT,UIF,DIL,DIS,DL,DS,DUMMY,DWK,ENSGWK,ESGWK,ETIME,ETN,HMC,
2  ID,IN,IT,IWAY,NNSG,NOHS,NSGBC,NSGCFH,NSGCL,NSGCS,NSGEOF,NSGF,
3  NSGHR,NSGN,NJGNM,NSGSN,NSGU,NSGWK,NSGWUC,OAIE,OFLE1,OUT,PDATA,
4  PIUATA,PSJGWK,PP1,PS,PSGCFH,PSGCL,PSGCS,PSGDL,PSGI,PSOK,PSGL,
5  PSWK,PIN,PAI,SETIME,SGCFH,SGCL,SGCS,SGEOF,SGF,SGFH,SGHR,SQL,
6  SGN1,SGNOM,SGPI,SGSN,SGU,SGWK,SGWUC,SSN,SSSWK,SSTIME,SSTNO,
7  STIME,STN,TYPE,WDC
INTEGER      BMSG,CMA,CUMA,DVD,GRPID,GRPSEQ,ID2,IDENT,IEND,IORP,
1  IMAT,IMAX,ISE1,ISTAN,ITIME,IV,NENSGG,NESG,NSET,NWDC,NWUCOP,PDATA2
2,PNSGCF,PNSGCL,PNSGCS,WDCD

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C .....
COMMON CA(200),CRA(200),PS2
INTEGER CA,CHA,PS2
COMMON ABUNT(2),WDCI(3)
INTEGER ABUNT,WDCI
COMMON ISWT
COMMON IP
C BASIC INITIALIZATION SECTION
C INITIALIZE FILE NUMBERS
  OFILE1 = 1
  IN = 5
  OUT = 6
  SGF = 11
  NSGF = 12
C INITIALIZE FL GS
  SGLUP = 0
  NSGUP = 0
  INAT = 1
  NWUC = 9
  IDA(1) = 701
  IDA(2) = 802
  IDA(3) = 903
  IDA(4) = 1004
  IT = 1
C .....
C CARD INPUT DEFINITION SECTION
C THE FOLLOWING IS HOW YOU READ CARD INPUT VIA COBOL LINKAGE
C READ IN START WEEK AND END WEEK OF ANALYSIS
C READ IN A BLANK FIELD
  CALL CREAD1
  1 (IN,IT,STIME,ETIME,BLANK)
C READ IN TIME NUMBER RANGE
  CALL CREAD1
  1 (IN,IT,STN,ETN,BLANK)
C READ IN NUMBER OF ENTRIES IN SG DICTIONARY
C READ IN NUMBER OF NSG GROUPS
  CALL CREAD1
  1 (IN,IT,NSGC,NWUCGP,DUMMY)
C READ IN SUPPORT GENERAL DICTIONARY
  IT = 2
  DO 50 I=1,NWUC
  CALL CREAD2
  1 (IN,IT,NSGC(I),BSGC(2,I),BSGC(3,I),BSGC(4,I))
50 CONTINUE
C INITIALIZE INSPECTION USE MATRIX TO ZERO
  DO 100 I=1,NSGC
  DO 100 J=1,NWUCGP
  IMAT(I,J) = 0
100 CONTINUE
C INITIALIZE STARTING AND ENDING VALUES OF DO LOOP TO READ IN WUC GROUP
  ISTAR = 0
  IEND = 0
  DO 200 I=1,NWUCGP
  IT = 1
C READ IN GROUP ID
C READ GROUP SEQUENCE START
  CALL CREAD1
  * (IN,IT,GRPSEQ(I),GRPSEQ(I),DUMMY)
C READ IN NUMBER OF INSPECTIONS ASSOCIATED WITH THIS WUC GROUP
C READ IN NUMBER OF NSG ASSOCIATED WITH THIS WUC GROUP
  CALL CREAD1
  1 (IN,IT,INSGC,ENSGG(I),DUMMY)
C FIND OUT WHICH ENTRY OF THE INSPECTION MATRIX NEEDS MODIFICATION
  IT = 2
  DO 100 I=1,INSGC
  READ IN SGWUC ASSOCIATED WITH THIS NSG GROUP
  CALL CREAD2
  1 (IN,IT,SGWUC(1),SGWUC(2),SGWUC(3),SGWUC(4))
  DO 150 J=1,NSGC
  DO 125 K=1,4
  IF (SGWUC(K) = BSGC(K,J))150,125,150
125 CONTINUE
  IMAT(I,J) = 1
  GO TO 160
150 CONTINUE
160 CONTINUE
C UPDATE STARTING AND ENDING VALUES OF DO LOOP TO READ IN WUC GROUP
  ISTAR = IEND + 1
  IEND = IEND + ENSGG(I)
  DO 190 J=ISTAR,IEND
  CALL CREAD2
  1 (IN,IT,BSGC(1,J),BSGC(2,J),BSGC(3,J),BSGC(4,J))
190 CONTINUE
200 CONTINUE

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C      INITIALIZE NUMBER OF WUC DEFINITIONS TO IEND
      NSET = IEND
      IT = 3
C      READ IN WHEN DISCOVERED CODE DICTIONARY
      CALL CREADS
      I (IN,IT,WDCU(1),WDCU(2),WDCD(3),WDCD(4),WDCD(5),WDCD(6),WDCD(7),
2      WUCU(8),WUCU(9))
C      READ IN WDC INSPECTION
      CALL CREADS
      * (IN,IT,WDCI(1),WDCI(2),WDCI(3),DUMMY,DUMMY,DUMMY,DUMMY,DUMMY,
      * DUMMY,DUMMY,DUMMY)
      IT = 1
C      READ IN ABORT INDICES
      CALL CREADS
      * (IN,IT,ABORT(1),ABORT(2),DUMMY)
C      READ IN FIRST AIRCRAFT SUBSET INFORMATION
      CALL CREADS
      I (IN,IT,SSTNO,SSSWK,DUMMY)
      RETURN
      END
SUBROUTINE CORR2
THIS SUBROUTINE CALL A COROL SUBROUTINE TO READ THE DATA BANK
COMMON SECTION
C      *-----*-----*-----*-----*-----*-----*-----*-----*-----*
COMMON      AIE,BLANK,BSGC,CHSGI,C1,CNORM,CSGN,CTYPE,CWK,DCT,DDN,
1      DFH,DICT,UIFH,DIL,DIS,DL,DS,DUMMY,DWK,ENSGWK,ESGWK,ETIME,ETN,HMC,
2      IU,IN,IT,IWK,NNSG,NORS,NSGBC,NSGCFH,NSGCL,NSGCS,NSGEOF,NSGF,
3      NSGHR,NSGN,NSGNOM,NSGSN,NSGU,NSGWK,NSGWUC,OAIE,OFIL1,OUT,PDATA,
4      PIDATA,PSGWK,PPI,PS,PSGCFH,PSGCL,PSGCS,PSGDL,PSGI,PSGK,PSGL,
5      PSWK,PTN,PWK,SETIME,SGCFH,SGCL,SGCS,SGEOF,SGF,SGFH,SGHR,SQL,
6      SGN,SGNORM,SGPI,SGSN,SGU,SGWK,SGWUC,SSN,SSSWK,SSTIME,SSTNO,
7      STIME,STN,TYPE,WDC
COMMON      BNSGC,CMA,CUMA,DVD,GRPID,GRPSEQ,ID2,IDENT,IEND,IGRP,
1      IMAT,IMAX,ISLT,ISTAR,ITIME,IV,NENSGG,NESG,NSET,NWDC,NWUCGP,PDATA2
2      PNSGCF,PNSGCL,PNSGCS,WDCD
COMMON IP(7)
COMMON ION
C      DIMENSION SECTION
C      *-----*-----*-----*-----*-----*-----*-----*-----*-----*
DIMENSION      CNOHM(2),CWK(3),NSGWUC(4),PDATA(4),PIDATA(4),
1      PWK(3),SGPI(2),SGWUC(4)
DIMENSION      BSGC(4,3)
DIMENSION      CMA(200),DVD(4),IDA(4),IMAT(3,7),NENSGG(7),
1      PDATA2(4,3),WDCD(9)
DIMENSION      BNSGC(4,200)
DIMENSION      GRPID(7),GRPSEQ(7)
C      TYPE SPECIFICATION SECTION
C      *-----*-----*-----*-----*-----*-----*-----*-----*-----*
INTEGER      AIE,BLANK,BSGC,CHSGI,C1,CNORM,CSGN,CTYPE,CWK,DCT,DDN,
1      DFH,DICT,UIFH,DIL,DIS,DL,DS,DUMMY,DWK,ENSGWK,ESGWK,ETIME,ETN,HMC,
2      IU,IN,IT,IWK,NNSG,NORS,NSGBC,NSGCFH,NSGCL,NSGCS,NSGEOF,NSGF,
3      NSGHR,NSGN,NSGNOM,NSGSN,NSGU,NSGWK,NSGWUC,OAIE,OFIL1,OUT,PDATA,
4      PIDATA,PSGWK,PPI,PS,PSGCFH,PSGCL,PSGCS,PSGDL,PSGI,PSGK,PSGL,
5      PSWK,PTN,PWK,SETIME,SGCFH,SGCL,SGCS,SGEOF,SGF,SGFH,SGHR,SQL,
6      SGN,SGNORM,SGPI,SGSN,SGU,SGWK,SGWUC,SSN,SSSWK,SSTIME,SSTNO,
7      STIME,STN,TYPE,WDC
INTEGER      BNSGC,CMA,CUMA,DVD,GRPID,GRPSEQ,ID2,IDENT,IEND,IGRP,
1      IMAT,IMAX,ISLT,ISTAR,ITIME,IV,NENSGG,NESG,NSET,NWDC,NWUCGP,PDATA2
2      PNSGCF,PNSGCL,PNSGCS,WDCD
COMMON      CA(200),CMA(200),PS2
INTEGER      CA,CMA,PS2
COMMON      ABORT(2),WDCI(3)
INTEGER      ABORT,WDCI
COMMON ISWI
COMMON IP1
GO TO (IU,ION),TYPE
C      READ A SUPPORT GENERAL RECORD
10 CALL CORRD1
      * (SGF,SGLOF,SSN,SGWK,SGWUC(1),SGWUC(2),SGWUC(3),SGWUC(4),DUMMY,
      * DUMMY,SGU,SGHR,DUMMY,SGNORM,DUMMY,SGFH,SGCFH,SGCS,SGCL)
      RETURN
C      READ A NON-SUPPORT GENERAL RECORD
100 CALL CORRD1
      * (NSGF,NSGEOF,NSGSN,NSGWK,NSGWUC(1),NSGWUC(2),NSGWUC(3),NSGWUC(4),
      * WDC,HMC,NSGU,NSGHR,AIE,NSGNOM,NORS,CTYPE,NSGCFH,NSGCS,NSGCL)

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RETURN
END
SUBROUTINE SUBSET
THIS SUBROUTINE POSITION SG FILE FOR NEW AIRCRAFT SUBSET DEPENDING
ON IWAY FOR GROUPS 7-17
COMMON SECTION
C
C-----
COMMON AIE, BLANK, BSGC, CBSGI, CI, CNORM, CSGN, CTYPE, CWK, DCT, DDN,
1 DPH, DICT, DIFI, DIL, DIS, DL, DS, DUMMY, DWK, ENSGWC, ESGWK, ETIME, ETN, HMC,
2 ID, IN, IT, IWAY, NNSG, NOHS, NSGBC, NSGCFH, NSGCL, NSGCS, NSGEF, NSGF,
3 NSGHR, NSGN, NSGNOM, NSGSN, NSGU, NSGWK, NSGWUC, OAIE, OFILEI, OUT, PDATA,
4 PIDATA, PPSGWC, PPI, PS, PSGCFH, PSGCL, PSOC, PSODL, PSI, PSOK, PSOL,
5 PSWK, PTN, PTH, SETIME, SGCFH, SGCL, SGCS, SGEF, SGF, SGFH, SGHR, SGL,
6 SGN, SGNOM, SGI, SGN, SGO, SGWK, SGWUC, SSN, SSSWK, SSTIME, SSTNO,
7 STIME, STN, TYPE, WUC
COMMON BNSGC, CMA, CUMA, DVD, GRPID, GRPSEQ, ID2, IDENT, IEND, IGRP,
1 IMAT, IMAX, ISGT, ISTAR, ITIME, IV, NENSGG, NESG, NSET, NWDC, NWUCGP, PDATA2
2, PHSGCC, PHSGL, PHSGCCS, WDCD
COMMON IP(7)
COMMON IWA
C
C DIMENSION SECTION
C
C-----
DIMENSION CNORM(2), CWK(3), NSGWUC(4), PDATA(4), PIDATA(4),
1 PWA(3), SGN(2), SGWUC(4)
DIMENSION BSGC(4,3)
DIMENSION CMA(200), DVD(4), IDA(4), IMAT(3,7), NENSGG(7),
1 PDATA2(4,3), JCU(9)
DIMENSION BNSGC(4,200)
DIMENSION GRPID(7), GRPSEQ(7)
C
C TYPE SPECIFICATION SECTION
C
C-----
INTEGER AIE, BLANK, BSGC, CBSGI, CI, CNORM, CSGN, CTYPE, CWK, DCT, DDN,
1 DPH, DICT, DIFI, DIL, DIS, DL, DS, DUMMY, DWK, ENSGWC, ESGWK, ETIME, ETN, HMC,
2 ID, IN, IT, IWAY, NNSG, NOHS, NSGBC, NSGCFH, NSGCL, NSGCS, NSGEF, NSGF,
3 NSGHR, NSGN, NSGNOM, NSGSN, NSGU, NSGWK, NSGWUC, OAIE, OFILEI, OUT, PDATA,
4 PIDATA, PPSGWC, PPI, PS, PSGCFH, PSGCL, PSOC, PSODL, PSI, PSOK, PSOL,
5 PSWK, PTN, PTH, SETIME, SGCFH, SGCL, SGCS, SGEF, SGF, SGFH, SGHR, SGL,
6 SGN, SGNOM, SGI, SGN, SGO, SGWK, SGWUC, SSN, SSSWK, SSTIME, SSTNO,
7 STIME, STN, TYPE, WUC
INTEGER BNSGC, CMA, CUMA, DVD, GRPID, GRPSEQ, ID2, IDENT, IEND, IGRP,
1 IMAT, IMAX, ISGT, ISTAR, ITIME, IV, NENSGG, NESG, NSET, NWDC, NWUCGP, PDATA2
2, PHSGCC, PHSGL, PHSGCCS, WDCD
COMMON CA(200), CMA(200), PS2
INTEGER CA, CMA, PS2
COMMON AROUT(2), WDCI(3)
INTEGER AROUT, WDCI
COMMON ISAT
COMMON IP(7)
ISW = 0
SET PSGI TO ZERO
PSGI = 0
C
C INITIALIZE PREVIOUS WEEK INDICES TO -1
C
C-----
DO 200 I=1, NWUCGP
IP(I) = -1
200 CONTINUE
C
C INITIALIZE CUMULATIVE MAINTENANCE ACTIONS TO -1
DO 300 I=1, NSET
CRA(I) = -1
CA(I) = -1
CMA(I) = -1
300 CONTINUE
GO TO (320, 325), IWAY
C
C ENTER HERE FOR BEGINNING OF NEW AIRCRAFT
C
C INITIALIZE AIRCRAFT START TIME
320 STIME = STIME
C
C INITIALIZE AIRCRAFT SUBSET NUMBER
SSN = 1
C
C SAVE PREVIOUS TAIL NUMBER
PTH = SGN
C
C CHECK IF TAIL NUMBER SUBSET EXIST
IF (SGSN - SSI(2)) 331, 332, 330
C
C ENTER HERE FOR BEGINNING OF AIRCRAFT SUBSET
C
C UPDATE AIRCRAFT SUBSET NUMBER
325 SSN = SSN + 1
C
C INITIALIZE AIRCRAFT SUBSET START TIME
SSTIME = SSGW
C
C READ IN SUBSET INFORMATION
330 READ (IN, 35) SSTNO, SSSWK
C
C 35 FORMAT (2I1, A4)
330 CALL CRFACI
1 TIN, IT, SSTNO, SSSWK, DUMMY)
C
C CHECK FOR CHANGE IN TAIL NUMBER
IF (SSGN - SSIN) 331, 332, 320
C
C INITIALIZE AIRCRAFT END TIME

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331 SET TIME = TIME
    GO TO 340
332 SET TIME = TIME
    GO TO 340
333 SET TIME = TIME
    GO TO 340
334 SET TIME = TIME
    GO TO 340
335 SET TIME = TIME
    GO TO 340
336 SET TIME = TIME
    GO TO 340
337 SET TIME = TIME
    GO TO 340
338 SET TIME = TIME
    GO TO 340
339 SET TIME = TIME
    GO TO 340
340 IF (SGWK = 5) TIME 345,349,349
    READ A SUPPORT GENERAL RECORD FROM THE DATA BANK VIA COBOL ON SGP
345 TYPE = 1
    CALL COP2
346 CHECK BLOCKING FLAG
    IF (SGSN = 0) GO TO 347
347 CHECK FOR END OF INFORMATION (EOF)
    IF (SGLOP) 10210,340,10200
    *****
348 CHECK FOR CHANGE IN TAIL NUMBER
349 IF (SGSN = PIN, 320,350,320
    CHECK IF A SUBSET EXISTS
350 IF (SGSN = SSTNO) 352,351,320
351 CHECK ENDTIME
352 IF (SLTIME = SGWK) 325,325,360
353 CHECK ENDTIME
354 IF (SETIME = SGWK) 345,345,360
355 FIND NEXT LEGAL SGWUC
360 CALL FLSG2
    RETURN
10200 CONTINUE
    WHILE (6,10210)
10210 FORMAT (13H SG OF STOP2 )
    IT1 = 0
    CALL CLOSEF (1,1)
    CALL LOJMSG
    CALL EXIT
    END

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6-200

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365 CONTINUE
GO TO 410
369 CONTINUE
ENTRY FNLSG2
TYPE = 1
C READ A SG RECORD
CALL CDR2
C CHECK TAIL NUMBER AGAINST 99999999 PADDING OF LAST LAST BLOCK
IF (SGSN = 99999999) 375,405,375
C CHECK FOR EOF
375 IF (SGEOF) 400,360,400
SET TAIL NUMBER TO 99999999
400 SGSN = 99999999
405 CHSG1 = NSGCL - 1
410 CONTINUE
CI = CHSG1
RETURN
END
SUBROUTINE FLSG2
THIS SUBROUTINE FINISHES THE END OF THE CURRENT INSPECTION
C COMMON SECTION
C
COMMON /IE,HLANK,NSGC,CHSG1,CI,CNORM,CSGN,CTYPE,CWK,DCT,DDN,
1 DPH,DIC,DIH,DIL,DIS,DL,DS,DUMMY,DWK,ENSGWK,ESGWK,ETIME,ETN,HMC,
2 ID,II,II,IIWAY,NSG,NOHS,NSGHC,NSGCFH,NSGCL,NSGCS,NSGEOF,NSGF,
3 NSGHR,NSGHR,SGNOM,NSGSH,NSGU,NSGWK,NSGWUC,OAIE,OFLEI,OUT,PDATA,
4 PIDATA,PSGWK,PPI,PS,PSGCFH,PSGCL,PSGCS,PSGDL,PSGI,PSOK,PSGL,
5 PSWK,PIN,PWK,SETIME,SGCFH,SGCL,SGCS,SGEOF,SGF,SGFH,SGHR,SQL,
6 SGNISGNOR,SGI,SGSH,SGU,SGWK,SGWUC,SSN,SSSWK,SSTIME,SSTNO,
7 STIME,STIME,TYPE,VOC
COMMON /HSGC,CHA,CUMA,DVD,GRPID,GRPSEQ,ID2,IDENT,IEND,IGRP,
1 IMAT,IMAX,ISCT,ISTAR,ITIME,IV,NENSGG,NESG,NSET,NWDC,NWUCGP,PDATA2
2,PNSGCF,PNSGCL,PNSGCS,WDCD
COMMON /IP(7)
COMMON /IDN
C DIMENSION SECTION
C
COMMON /CNORM(2),CWK(3),NSGWUC(4),PDATA(4),PIDATA(4),
1 PWR(3),SG(4),SGWUC(4)
COMMON /NSG(4,5)
COMMON /CHA(200),DVD(4),IDA(4),IMA(3,7),NENSGG(7),
1 PDATA2(4,3),NWUC(9)
COMMON /PNS C(4,200)
COMMON /GRP(7),GRPSEQ(7)
C TYPE SPECIFICATION SECTION
C
COMMON /IE,HLANK,NSGC,CHSG1,CI,CNORM,CSGN,CTYPE,CWK,DCT,DDN,
1 DPH,DIC,DIH,DIL,DIS,DL,DS,DUMMY,DWK,ENSGWK,ESGWK,ETIME,ETN,HMC,
2 ID,II,II,IIWAY,NSG,NOHS,NSGHC,NSGCFH,NSGCL,NSGCS,NSGEOF,NSGF,
3 NSGHR,NSGHR,SGNOM,NSGSH,NSGU,NSGWK,NSGWUC,OAIE,OFLEI,OUT,PDATA,
4 PIDATA,PSGWK,PPI,PS,PSGCFH,PSGCL,PSGCS,PSGDL,PSGI,PSOK,PSGL,
5 PSWK,PIN,PWK,SETIME,SGCFH,SGCL,SGCS,SGEOF,SGF,SGFH,SGHR,SQL,
6 SGNISGNOR,SGI,SGSH,SGU,SGWK,SGWUC,SSN,SSSWK,SSTIME,SSTNO,
7 STIME,STIME,TYPE,VOC
COMMON /HSGC,CHA,CUMA,DVD,GRPID,GRPSEQ,ID2,IDENT,IEND,IGRP,
1 IMAT,IMAX,ISCT,ISTAR,ITIME,IV,NENSGG,NESG,NSET,NWDC,NWUCGP,PDATA2
2,PNSGCF,PNSGCL,PNSGCS,WDCD
COMMON /CA(200),CHA(200),PS2
COMMON /ABOH(1,2),WDCI(3)
COMMON /ABOH(1),WUCI
COMMON /ISWT
COMMON /IP(1)
C
C
C SAVE LAST SG RECORD INFORMATION
20 PSWK = SGWK
PSGCFH = SGCFH
PSGCS = SGCS
PSGCL = SGCL

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C      IPI = CI
      FIND NEXT LEGAL SGWUC
80     CALL FNESSG2
C      CHECK FOR END TIME
      IF (SGWK - SUTIME) 85,300,300
C      CHECK FOR CHANGE IN TAIL NUMBER
85     IF (PTN - SUGN) 300,80,300
C      CALCULATE DIFFERENCE IN WEEK FIELD FOR CONSECUTIVE SG RECORDS
88     DWK = SGWK - PSWK
C      CHECK FOR CHANGE IN WEEK
      IF (DWK) 300,20,90
C      IS PREVIOUS SG INDEX = 3(3400).
90     IF (PSGI-3) 95,00,95
C      IS DIFF. IN WEEKS MORE THAN 2.
95     IF (DWK-3) 20,200,200
C      IS DIFF. IN WEEKS MORE THAN 4.
100    IF (DWK-5) 20,200,200
200    CONTINUE
      ESWK = PSWK
      RETURN
300    CONTINUE
      ESWK = SETIME + 1
      RETURN
      END
SUBROUTINE FLNS12
C      THIS SUBROUTINE FINDS LEGAL NSG RECORD TYPE 4 RECORD FROM DATA BANK
C      COMMON SECTION
C      .....
COMMON      AIE,ALANK,BSGC,CBSGI,C1,CNORM,CSGN,CTYPE,CWK,DCT,DDN,
1  UFH,DICT,UFH,DI,DIS,DL,DS,DUMMY,DWK,ENSGWK,ESGWK,ETIME,ETN,HMC,
2  IU,II,IT,IMAX,INSG,NORS,NSGHC,NSGCFH,NSGCL,NSGCS,NSGEOF,NSGF,
3  NSGHR,NSGHRM,NSGN,NSGN,NSGU,NSGWK,NSGWUC,OAIE,OFILEI,OUT,PUATA,
4  PIDATA,PSWK,PPI,PS,PSGCFH,PSGCL,PSGCS,PSGDL,PSOI,PSOK,PSGL,
5  PSWK,PIN,PWKI,SETIME,SGCFH,SGCL,SGCS,SGEOF,SGF,SGFH,SGHR,SGI,
6  SGN,SGNORM,SGPI,SGSN,SGU,SGWK,SGWUC,SSN,SSSWK,SSTIME,SSTNO,
7  STIME,STI,TYPE,VUC
COMMON      INSG,CMA,CUMA,DVD,GRPID,GRPSEQ,ID2,IDENT,IEND,IGRP,
1  IMAT,IMAX,ISET,ISTAR,ITIME,IV,NENSGG,NESSG,NSET,NWDC,NWUCGP,PDATA2
2  PHSUCF,PHSGCL,PHSGCS,WDCD
COMMON      IPI(7)
COMMON      IPI
C      DIMENSION SECTION
C      .....
DIMENSION      CNORM(2),CWK(3),NSGWUC(4),PDATA(4),PIDATA(4),
1  PWK(3),SGU(2),SGWUC(4)
DIMENSION      BSGC(4,3)
DIMENSION      CMA(200),DVD(4),IDA(4),IMAT(3,7),NENSGO(7),
1  PUATA2(4,3),WDCD(9)
DIMENSION      BSGC(4,200)
DIMENSION      GRPID(7),GRPSEQ(7)
C      TYPE SPECIFICATION SECTION
C      .....
INTEGER      AIE,ALANK,BSGC,CBSGI,C1,CNORM,CSGN,CTYPE,CWK,DCT,DDN,
1  UFH,DICT,UFH,DI,DIS,DL,DS,DUMMY,DWK,ENSGWK,ESGWK,ETIME,ETN,HMC,
2  IU,II,IT,IMAX,INSG,NORS,NSGHC,NSGCFH,NSGCL,NSGCS,NSGEOF,NSGF,
3  NSGHR,NSGHRM,NSGN,NSGN,NSGU,NSGWK,NSGWUC,OAIE,OFILEI,OUT,PUATA,
4  PIDATA,PSWK,PPI,PS,PSGCFH,PSGCL,PSGCS,PSGDL,PSOI,PSOK,PSGL,
5  PSWK,PIN,PWKI,SETIME,SGCFH,SGCL,SGCS,SGEOF,SGF,SGFH,SGHR,SGI,
6  SGN,SGNORM,SGPI,SGSN,SGU,SGWK,SGWUC,SSN,SSSWK,SSTIME,SSTNO,
7  STIME,STI,TYPE,VUC
INTEGER      INSG,CMA,CUMA,DVD,GRPID,GRPSEQ,ID2,IDENT,IEND,IGRP,
1  IMAT,IMAX,ISET,ISTAR,ITIME,IV,NENSGG,NESSG,NSET,NWDC,NWUCGP,PDATA2
2  PHSUCF,PHSGCL,PHSGCS,WDCD
COMMON      CA(200),CRA(200),PS2
COMMON      AROH1(2),WDC1(3)
COMMON      AROH1,WDC1
COMMON      ISWT
COMMON      IPI
C      .....
ITIME = 1
C      CHECK RECKING FLAG
350    IF (INSGN = 99999999) 355,805,355
C      CHECK FOR END OF INFORMATION
355    IF (NSGEOF) 800,360,800
C      CHECK FOR RECORD TYPE 4
360    IF (CTYPE = 4) 370,380,370
370    TYPE = 2
      CALL CDP2
      GO TO 350
C      CHECK FOR CHANGE IN TAILNUMBER
380    IF (INSGN = PTN) 370,390,805
C      CHECK WEEK FOR PASS END OF CURRENT SG
390    IF (INSGWK = ESGWK) 370,395,400
395    IF (ISWT) 370,370,410

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C   CHECK WEEK BEFORE THE START OF NEXT INSPECTION
400 IF (NSGWK = SGWK) 410,410,810
410 CONTINUE
    GO TO (420,430),ITIME
420 CONTINUE
    ITIME = 2
C   SAVE PREVIOUS WEEK
    PMSGWK = NSGWK
    PMSGCF = NSGCFH
    PMSGCS = NSGCS
    PMSGCL = NSGCL
430 CONTINUE
    IRA = 0
    MAI = 0
    AI = 0
C   CHECK FOR CHANGE IN WEEK
    IF (PMSGWK = NSGWK) 790,440,790
440 CONTINUE
    IF (NSGSK = PTN) 790,450,790
450 CONTINUE
C   CHECK FOR VALID WHEN DISCOVERED CODE
    DO 520 I=1,NWDC
    IF (WDCD(I) = WC.) 520,590,520
520 CONTINUE
    DO 540 K=1,NSGBC
    IF (WDC = WUCI(K)) 540,550,540
540 CONTINUE
    GO TO 370
550 CONTINUE
    IRA = K
    GO TO 619
590 CONTINUE
    MAI = I
600 CONTINUE
    IF (I = APORTI(1)) 602,615,602
602 IF (I = ADOR(1)) 619,615,619
615 AI = I
619 CONTINUE
    IS(AR) = 0
    IEND = 0
    DO 700 I=1, NWUCGP
    IS(AR) = IEND + I
    IEND = IEND + NMSGG(I)
    DO 690 J = ISTAR, IEND
    DO 680 K=1,4
    IF (UNSGC(K,J) = NSGWC(K)) 620,680,620
620 IF (UNSGC(K,J) = BLANK) 690,720,690
680 CONTINUE
    GO TO 720
690 CONTINUE
700 CONTINUE
    GO TO 370
720 CONTINUE
    IF (MAI) 725,750,725
725 CONTINUE
C   ACCUMULATE MAINTENANCE ACTIONS
    CMA(J) = CMA(J) + SGU
    IF (AI) 730,370,730
730 CA(J) = CA(J) + NSGU
    GO TO 370
750 CONTINUE
    IF (IRA) 760,370,760
760 CMA(J) = CMA(J) + NSGU
    GO TO 370
790 CONTINUE
    CALL V7T10
C   ZERO OUT -CA- ARMY -
    ISTAR = 0
    IEND = 0
    DO 795 I=1,NWUCGP
    ISTAR = IEND + 1
    IEND = IEND + NMSGG(I)
    DO 795 J=ISTAR,IEND
    CA(J) = 0
795 CONTINUE
C   RE-INITIALIZE -ITIME- TO 1 -
    ITIME = 1
C   GO SEE IF TIME OF NEXT INSPECTION IS EXCEEDED -
    GO TO 400
800 MSGSK = 9999999
805 MSGWK = SETIME + 1
810 RETURN
END
SUBROUTINE V4H2
COMMON SECTION

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C      .....
COMMON      AIE, BLANK, BSGC, CBSGI, CI, CNORM, CSGN, CTYPE, CWK, DCT, DDN,
1  DFH, DIC, UIFH, DL, DIS, DL, US, DUMMY, DWK, ENSGWK, ESGWK, ETIME, ETN, HMC,
2  ID, IN, IT, IMAX, NISG, NONS, NSGBC, NSGCFH, NSGCL, NSGCS, NSGEOF, NSGF,
3  NSGHR, NSGN, NSGNOM, NSGSN, NSGU, NSGWK, NSGWUC, OAIE, OFILE1, OUT, PDATA,
4  PIUATA, PISGWK, PPI, PS, PSGCFH, PSGCL, PSGCS, PSGDL, PSGI, PSGR, PSGL,
5  PSWK, PTN, PPKI, JETIME, SGCFH, SGCL, SGCS, SGEOF, SGF, SGFH, SGHR, SGL,
6  SGN1, SGNOM, SGP, SGN, SGU, SGWK, SGWUC, SSN, SSSWK, SSTEIME, SSTNO,
7  STINL, STIN, TYPE, WUC
COMMON      B,SGC, CMA, CUMA, DVD, GRPID, GRPSEQ, ID2, IDENT, IEND, IGRP,
1  IMAX, IMAX, ISET, ISTAR, ITIME, IV, NENSGG, NESG, NSET, NWDC, NWDCGP, PDATA2
2, PMSGCF, PMSGCL, PMSGCS, WDCD
COMMON IP(7)
COMMON IDA
C      DIMENSION SECTION
C      .....
C      DIMENSION      CNORM(2), CWK(3), NSGWUC(4), PDATA(4), PIUATA(4),
1  PPKI(3), SGL(2), SGWUC(4)
C      DIMENSION      USG(4,3)
C      DIMENSION      CMA(200), DVD(4), IDA(4), IMAT(3,7), NENSGG(7),
1  PDATA2(4,3), WDCD(9)
C      DIMENSION      PMSGC(4,200)
C      DIMENSION      GRPID(7), GRPSEQ(7)
C      TYPE SPECIFICATION SECTION
C      .....
C      INTEGER      AIF, BLANK, BSGC, CBSGI, CI, CNORM, CSGN, CTYPE, CWK, DCT, DDN,
1  DFH, DIC, UIFH, DL, DIS, DL, US, DUMMY, DWK, ENSGWK, ESGWK, ETIME, ETN, HMC,
2  ID, IN, IT, IMAX, NISG, NONS, NSGBC, NSGCFH, NSGCL, NSGCS, NSGEOF, NSGF,
3  NSGHR, NSGN, NSGNOM, NSGSN, NSGU, NSGWK, NSGWUC, OAIE, OFILE1, OUT, PDATA,
4  PIUATA, PISGWK, PPI, PS, PSGCFH, PSGCL, PSGCS, PSGDL, PSGI, PSGR, PSGL,
5  PSWK, PTN, PPKI, JETIME, SGCFH, SGCL, SGCS, SGEOF, SGF, SGFH, SGHR, SGL,
6  SGN1, SGNOM, SGP, SGN, SGU, SGWK, SGWUC, SSN, SSSWK, SSTEIME, SSTNO,
7  STINL, STIN, TYPE, WUC
C      INTEGER      B,SGC, CMA, CUMA, DVD, GRPID, GRPSEQ, ID2, IDENT, IEND, IGRP,
1  IMAX, IMAX, ISET, ISTAR, ITIME, IV, NENSGG, NESG, NSET, NWDC, NWDCGP, PDATA2
2, PMSGCF, PMSGCL, PMSGCS, WDCD
COMMON      CA(200), CHA(200), PS2
C      INTEGER      CA, CHA, PS2
COMMON      APOM(1)(2), WUCI(3)
C      INTEGER      ARUH(1, WUCI)
COMMON ISWT
COMMON IP1
C      INTEGER      CAA
C      ENTRY V7110
C      IEND = 0
C      ISWT = 0
C      DO 200 IGRP=1, NWDCGP
C      CALCULATE FIRST HALF OF OUTPUT IDENT
C      ISTAR = IPND + I
C      IEND = IEND + NENSGG(IGRP)
C      IMAX = IP(IGRP)
C      IF (IMAX) 200, 201, 100
C      100 CONTINUE
C      UVD(1) = 10 * (PMSGWK - PDATA2(1, IMAX))
C      UVD(2) = PMSGCF - PDATA2(2, IMAX)
C      UVD(3) = 10 * (PMSGCS - PDATA2(3, IMAX))
C      UVD(4) = 10 * (PMSGCL - PDATA2(4, IMAX))
C      US = (PMSGCS - PS2) * 10
C      DO 190 J = ISTAR, IEND
C      ISET = J - ISTAR
C      CALCULATE SECOND HALF OF OUTPUT ID
C      IDENT = 1000 * GRPID(IGRP) + GRPSEQ(IGRP) + ISET
C      CUMA = 10 * CMA(J)
C      DO 180 K=1,4
C      IF (UVD(K)) 190, 190, 170
C      170 CONTINUE
C      ID2 = IDATK + 10000 * SSN + 10 * IMAX
C      IV = UVD(K)
C      CALL CORUHI
C      * (IDENT, ID2, CUMA, DVD(K), IV)

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      IF (U) IAH,IAH,1'S
175 ID2 = 10000*SN + K + 2000 + 10*IMAX
      CAA = 10*CA(J)
      CALL COBOUT
      * (IDENT, ID2, CAA, (S, IV))
180 CONTINUE
190 CONTINUE
200 CONTINUE
      PS2 = PNSGCS
      RETURN
      ENTRY V18
      DDN = 1
      IEND = 0
      ISTAR = 0
      UO 1200 1GRP=1, IWUCGP
      ISTAR = IEND + 1
      IFUO = IEND + PNSGG(1GRP)
      IF (IMAT(C1,1GRP), 1200,1200,300)
300 IMAX = IP(1GRP)
      IF (IMAX) 1200,1200,1100
1100 CONTINUE
      UVD(1) = 10 * (PNSGWC - PDATA2(1,IMAX))
      UVD(2) = PNSGCF - PDATA2(2,IMAX)
      UVD(3) = 10 * (PNSGCS - PDATA2(3,IMAX))
      UVD(4) = 10 * (PNSGCL - PDATA2(4,IMAX))
      UO 1190 J=ISTAR, IEND
      ISET = J-ISTAR
C      CALCULATE SECOND HALF OF OUTPUT ID
      IDENT = 1000*GRP1, (1GRP) + GRPSEQ(1GRP) + ISET
      UO 1180 K=1,4
      ID2 = 10000*SN + K + 1800 + 10*IMAX + 100000*CI
      CALL COBOUT
      * (IDENT, ID2, CAA(J), DDN, UVD(K))
1180 CONTINUE
1190 CONTINUE
1200 CONTINUE
      RETURN
      END

/*      REQUIRED PLACE FORTRAN BCD SOURCE BEFORE THIS CARD
//LKED,ADDCALL DU DSN:P,MLIN,DISP:SNH,VOL:SER>11,UNIT>DSK
//LKED,YSIN DU DATA SPACE>LTKR,[5,5]
//INCLUDE ADCALL(R777)
/*      REQUIRED PLACE LINKED CONTROL CARDS IF ANY BEFORE THIS CARD
//CHG,(TU1001) DU DIS>X,UNIT>[A+F1,2,DEFER],DSN>A,9897419, CT19/13 1
//
// VOL>SER>[F1,A+F1,B+F1,C+F1,D+F1,E+F1,F+F1,G+F1,H+F1, CT12 0
// I+F1,J+F1,K+F1,L+F1,M+F1,N+F1,O+F1,P+F1,Q+F1,R+F1,S+F1] T12 3
//
//CHG,(TU3F001) DU DIS>X,UNIT>[T+F3,1,DEFER],DSN>C,9897418, CT14 1
// VOL>SER>[F3,A+F3,B+F3,C+F3,D+F3,E+F3,F+F3,G+F3,H+F3, CT14 2
// I+F3,J+F3,K+F3,L+F3,M+F3,N+F3,O+F3,P+F3,Q+F3,R+F3,S+F3] T14 3
//CHG,(TU4F001) DU DSN>P,9897415,DISP>[OLD],PASS] O15-IN
//CHG,(TU6F001) DU DIS>X,UNIT>[A+F5,2,DEFER],DSN>E,9897412, CT22/23 1
// VOL>SER>[F5,A+F5,B+F5,C+F5,D+F5,E+F5,F+F5,G+F5,H+F5, CT22 2
// I+F5,J+F5,K+F5,L+F5,M+F5,N+F5,O+F5,P+F5,Q+F5,R+F5,S+F5] T22 3
//CHG,(TU11F001) DU DSN>P,9897413,DISP>[PASS],SPACE>[CYL,[009,001]] O25-OUT
/*
//C9897H EXEC C9603H,TIME>02,ACCT>D35323007 STDALONE JOHN LINK
//CHG,(TU12) DU DIS>X,[KEEP],UNIT>[A+F1,2,DEFER],DSN>A,9897419, CT12/13 1
// VOL>SER>[F1,A+F1,B+F1,C+F1,D+F1,E+F1,F+F1,G+F1,H+F1, CT12 2
// I+F1,J+F1,K+F1,L+F1,M+F1,N+F1,O+F1,P+F1,Q+F1,R+F1,S+F1] T12 3
//CHG,(TU14) DU DIS>X,[KEEP],UNIT>[T+F3,1,DEFER],DSN>C,9897418, CT14 1
//
// VOL>SER>[F3,A+F3,B+F3,C+F3,D+F3,E+F3,F+F3,G+F3,H+F3, CT14 2
// I+F3,J+F3,K+F3,L+F3,M+F3,N+F3,O+F3,P+F3,Q+F3,R+F3,S+F3] T14 3
//CHG,(TU15) DU DSN>P,9897415,DISP>[OLD,DELETE] O15-IN
//CHG,(TU22) DU DIS>X,[KEEP],UNIT>[T+F5,1,DEFER],DSN>E,9897412, CT22 1
// VOL>SER>[F5,A+F5,B+F5,C+F5,D+F5,E+F5,F+F5,G+F5,H+F5, CT22 2
// I+F5,J+F5,K+F5,L+F5,M+F5,N+F5,O+F5,P+F5,Q+F5,R+F5,S+F5] T22 3
//CHG,(TU25) DU DSN>P,9897413,DISP>[OLD,DELETE] O25-IN
//CHG,(TPRIN) DU *SPACE>[TRK,[1,1]]
T/P TU15 1040000208
T/P TU25 1040000208
T/P TU22 1040000204
T/P TU14 1040070207
T/P TU12 1040070207
/*      PLACE T/P CONTROL CARDS BEFORE THIS CARD

```

### 6.10.3 SORT AIRCRAFT LEVEL OBSERVATIONS

```
//T9897Z J08 01: G. WANG. : ,PRTY>02,TPRND>HOLD X1310
//C9897Z EXEC P9622N,W>19,TIME>03,ACCT>D35323007 22/12 SORT
//CHG,SORT11N DU DISP>[KEEP],UNIT>[A+F5,2,DEFER], CT22/23 1
// DSN>+E,9897412, CT22 2
// VOL>SER>[+5,A+F5,B+F5,C+F5,D+F5,E+F5,F+F5,G+F5,H+F5, CT22 3
// I+F5,J+F5,K+F5,L+F5,M+F5,N+F5,O+F5,P+F5,Q+F5,R+F5,S+F5],CT22 4
// DCB>[LRECL>0040,BLKSIZE>2800],LABEL>[NSL,RETPD>099]
//CHG,SORTOUT DU DISP>[PASS],UNIT>[A+F1,2,DEFER],DSN>+A,9897411, CT12/13 1
// VOL>SER>[+1,A+F1,B+F1,C+F1,D+F1,E+F1,F+F1,G+F1,H+F1, CT12 2
// I+F1,J+F1,K+F1,L+F1,M+F1,N+F1,O+F1,P+F1,Q+F1,R+F1,S+F1],CT12 3
// DCB>[LRECL>0040,BLKSIZE>2800]
//CHG,SYSIN DD *,DCB>BLKSIZE>0080,SPACE>[TRK,[1,1]]
SORT FIELDS>[003,014,CH,A,032,006,CH,A],SIZE>E0600000
MODS E15>[E15,008,SORTLIB,N],E18>[E18,024,SORTLIB,N]
/*
```

### 6.10.4 SORT WUC LEVEL OBSERVATIONS

```
//T98975B J08 01: G. WANG. : ,PRTY>02,TPRND>HOLD SORT IV-1A X1310
//C9897H EXEC P9622N,W>19,TIME>06,ACCT>D35323007 22/12 SORT
//CHG,SORT11N DU DISP>[KEEP],UNIT>[A+F5,2,DEFER], CT22/23 1
// DSN>+E,9897412, CT22 2
// VOL>SER>[+5,A+F5,B+F5,C+F5,D+F5,E+F5,F+F5,G+F5,H+F5, CT22 3
// I+F5,J+F5,K+F5,L+F5,M+F5,N+F5,O+F5,P+F5,Q+F5,R+F5,S+F5],CT22 4
// DCB>[LRECL>0040,BLKSIZE>2800],LABEL>[NSL,RETPD>001]
//CHG,SORTOUT DU DISP>[PASS],UNIT>[A+F1,2,DEFER],DSN>+A,9897421, CT12/13 1
// VOL>SER>[+1,A+F1,B+F1,C+F1,D+F1,E+F1,F+F1,G+F1,H+F1, CT12 2
// I+F1,J+F1,K+F1,L+F1,M+F1,N+F1,O+F1,P+F1,Q+F1,R+F1,S+F1],CT12 3
// DCB>[LRECL>0040,BLKSIZE>2800]
//CHG,SYSIN DD *,DCB>BLKSIZE>0080,SPACE>[TRK,[1,1]]
SORT FIELDS>[003,014,CH,A,032,006,CH,A],SIZE>E1200000
MODS E15>[E15,008,SORTLIB,N],E18>[E18,024,SORTLIB,N]
/*
//C9897H EXEC C9603N,TIME>01,ACCT>D35323007 STDALONE T P
//CHG,TUI2 DU DISP>[KEEP],UNIT>[A+F1,2,DEFER],DSN>+A,9897421, CT12/13 1
// VOL>SER>[+1,A+F1,B+F1,C+F1,D+F1,E+F1,F+F1,G+F1,H+F1, CT12 2
// I+F1,J+F1,K+F1,L+F1,M+F1,N+F1,O+F1,P+F1,Q+F1,R+F1,S+F1] T12 3
//CHG,TPRIN DD *,SPACE>[TRK,[1,1]]
T/P TUI2 10040402040
/* PLACE T/P CONTROL CARDS BEFORE THIS CARD
```

### 6.10.5 MERGE WUC LEVEL OBSERVATIONS

```
//T9897MA J08 01: G. WANG. : ,PRTY>02,TPRND>HOLD MERGE X2 X1310
//C9897A EXEC P9622N,W>19,TIME>03,ACCT>D35323007 MAX 7-WAY MERGE
//CHG,SORTIN01 DU DISP>[KEEP],UNIT>[T+F5,1,DEFER],DSN>+E,9897421, CT22 1
// VOL>SER>[+5,A+F5,B+F5,C+F5,D+F5,E+F5,F+F5,G+F5,H+F5, CT22 2
// I+F5,J+F5,K+F5,L+F5,M+F5,N+F5,O+F5,P+F5,Q+F5,R+F5,S+F5],CT22 3
// DCB>[LRECL>0040,BLKSIZE>2800],LABEL>[NSL,RETPD>099]
//CHG,SORTIN02 DU DISP>[KEEP],UNIT>[T+F6,1,DEFER],DSN>+F,9897421, CT23 1
// VOL>SER>[+6,A+F6,B+F6,C+F6,D+F6,E+F6,F+F6,G+F6,H+F6, CT23 2
// I+F6,J+F6,K+F6,L+F6,M+F6,N+F6,O+F6,P+F6,Q+F6,R+F6,S+F6],CT23 3
// DCB>[LRECL>0040,BLKSIZE>2800],LABEL>[NSL,RETPD>099]
//CHG,SORTIN03 DU DISP>[KEEP],UNIT>[T+F7,1,DEFER],DSN>+G,9897421, CT24 1
// VOL>SER>[+7,A+F7,B+F7,C+F7,D+F7,E+F7,F+F7,G+F7,H+F7, CT24 2
// I+F7,J+F7,K+F7,L+F7,M+F7,N+F7,O+F7,P+F7,Q+F7,R+F7,S+F7],CT24 3
// DCB>[LRECL>0040,BLKSIZE>2800],LABEL>[NSL,RETPD>099]
//CHG,SORTIN04 DU DISP>[KEEP],UNIT>[T+F8,1,DEFER],DSN>+H,9897421, CT25 1
// VOL>SER>[+8,A+F8,B+F8,C+F8,D+F8,E+F8,F+F8,G+F8,H+F8, CT25 2
// I+F8,J+F8,K+F8,L+F8,M+F8,N+F8,O+F8,P+F8,Q+F8,R+F8,S+F8],CT25 3
// DCB>[LRECL>0040,BLKSIZE>2800],LABEL>[NSL,RETPD>099]
//CHG,SORTIN07 DU DISP>[KEEP],UNIT>[T+F4,1,DEFER],DSN>+D,9897421, CT15 1
// VOL>SER>[+4,A+F4,B+F4,C+F4,D+F4,E+F4,F+F4,G+F4,H+F4, CT15 2
// I+F4,J+F4,K+F4,L+F4,M+F4,N+F4,O+F4,P+F4,Q+F4,R+F4,S+F4],CT15 3
// DCB>[LRECL>0040,BLKSIZE>2800],LABEL>[NSL,RETPD>099]
//CHG,SORTOUT DU DISP>[KEEP],UNIT>[A+F1,2,DEFER],DSN>+A,9897411, CT12/13 1
// VOL>SER>[+1,A+F1,B+F1,C+F1,D+F1,E+F1,F+F1,G+F1,H+F1, CT12 2
// I+F1,J+F1,K+F1,L+F1,M+F1,N+F1,O+F1,P+F1,Q+F1,R+F1,S+F1],CT12 3
// DCB>[LRECL>0040,BLKSIZE>2800]
//CHG,SYSIN DD *,DCB>BLKSIZE>0080,SPACE>[TRK,[1,1]]
MERGE FIELDS>[003,014,CH,A,032,006,CH,A]
/*
```

[illegible]



```

05020 OPEN INPUT OFILE1 OUIPUT OFILECNT.
05030 READ-IN.
05040 READ OFILE1 1:ITU U-REC
05050 AT END GO TO RECORD-KFEP.
05070 IF FINIS-HFC-SW EQUAL 11: 00 TO TEST-SN.
05080 MOVE SN-0 TO SN-C.
05090 MOVE 10-0 TO ID-C.
05095 MOVE ZEHOS TO OUS-CNT OBS-SN-CNT SN-OBS-CNT.
05100 MOVE 11: TO F.HST-REC-SW.
05105 GO TO READ-IN.
05110 TEST-SN.
05115 ADD 1 TO OBS-CNT RECORDS-READ.
05120 IF SN-0 EQUAL SN-C GO TO TEST-ID.
05125 LAST-CHANGE.
05130 MOVE OBS-CNT TO CNT-C.
05140 ADD OBS-CNT TO OUS-SN-CNT.
05150 MOVE OBS-SN-CNT TO SN-OBS-CNT.
05155 ADD 1 TO RECORDS-PASS.
05160 WRITE OUS-REC-CNT FROM O-REC-CNT.
05170 MOVE ZEHOS 1) OBS-CNT OBS-SN-CNT SN-OBS-CNT.
05180 MOVE SN-0 TO SN-C.
05190 MOVE 10-0 TO ID-C.
05195 IF SN-0 EQUAL 199999999:
05196 GO TO RECORD-KEEP.
05200 GO TO READ-IN.
05210 TEST-ID.
05220 IF ID-0 EQUAL ID-C GO TO READ-IN.
05230 MOVE OBS-CNT TO CNT-C.
05240 ADD OBS-CNT TO OBS-SN-CNT.
05250 WRITE OBS-REC-CNT FROM O-REC-CNT.
05255 ADD 1 TO RECORDS-PASS.
05260 MOVE ZEHOS TO OBS-CNT.
05270 MOVE SN-0 TO SN-C.
05280 MOVE 10-0 1) ID-C.
05290 GO TO READ-IN.
05300 RECORD-KFEP.
05310 COMPUTE KOUNT > RECORDS-PASS - [(RECORDS-PASS / 90) * 90].
05320 LOOP3.
05330 WRITE OBS-REC-CNT FROM NINE-30.
05340 ADD 1 TO KOUNT.
05350 IF KOUNT IS LESS THAN 90 GO TO LOOP3.
05400 CLOSE-FILES.
05410 CLOSE OFILECNT OFILE1 WITH LOCK.
05420 DISPLAY : IN : RECORDS-READ UPON CONSOLE.
05430 DISPLAY : OUT : RECORDS-PASS UPON CONSOLE.
05440 DISPLAY : EOU 9897 : UPON CONSOLE.
05450 GORACK.
/* PLACE COUNL SOURCE BEFORE THIS CARD
//CHG.TFGIN DD *.SPACE>[CYL,(1,1)]
/* PLACE TFG DATA BEFORE THIS CARD
//TPR.TU12 DD DISP[OLD>KEEP],VOL>SER>+F1,UNIT>T+F1
//TPR.TU24 DD DISP[OLD>KEEP],VOL>SER>+F7,UNIT>T+F7
//TPR.TPRIN DD *.SPACE>[TRK,(1,1)]
T/P TU24 11000302030
/* PLACE T/P CONTROL CARDS BEFORE THIS CARD

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### 6.10.7 REGRESSION AND CORRELATION ANALYSIS

```

//C9897T JOB          01: G. WANG.  ,PRTY>05          XI310
//C9897T EXEC          P9627L,TIME>1,ACCT>D35323007    PUT PROGRAM IN LIBRARY
//CHG,INPUT            DD  *,SFAC>[CYL,1,1]]            1440 CDS
00000                  COMBINE      COMPILE              O. WANO.          C98970
01040 DATE-WRITTEN. 25 APR 72.                            C98970
01050 REMARKS. PHASE II- TASK IV- II-STATISTICS FORTRAN COBOL LINK.  C98970
01070      INPUT/OUTPUT - COBOL.                            C98970
02000 ENVIRONMENT DIVISION.                                C98970
02010 CONFIGURATION SECTION.                               C98970
02020 SOURCE-COMPUTER. IBM-360.                            C98970
02030 OBJECT-COMPUTER. IBM-360.                            C98970
02100 INPUT-OUTPUT SECTION.                                C98970
02110 .FILE-CONTROL.                                       C98970
02120     SELECT OFILE1                                     ASSIGN TO UT-S-FT01F001 C98970
02130     RESERVE 1 ALTERNATE AREA.                        C98970
02140     SELECT OFILE2NT                                  ASSIGN TO UT-S-FT10F001 C98970
02150     RESERVE 1 ALTERNATE AREA.                        C98970
02180     SELECT STATRPORT                                  ASSIGN TO UT-S-FT11F001 C98970
02190     RESERVE 1 ALTERNATE AREA.                        C98970
10000 DATA DIVISION.                                       C98970
10010 FILE SECTION.                                         C98970
14100 FD STATREPORT                                         C98970
14120     RECORDING MORE IS F                               C98970
14130     BLOCK CONTAINS 15 RECORDS                        C98970
14140     RECORD CONTAINS 130                               CHARACTERS C98970
14150     LABEL RECORD ARE OMITTED                        C98970

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14160		DATA RECORDS ARE STATREPORT-REC.		C98970
14200	01	STAT-REC SYNC.		C98970
14210	02	FILLER	PICTURE X(130).	C98970
17100	FU	OFFILE1		C98970
17120		RECURRING MODE IS F		C98970
17130		BLOCK CONTAINS 70 RECORDS		C98970
17140		RECORD CONTAINS 40	CHARACTERS	C98970
17150		LABEL RECORDS ARE OMITTED		C98970
17160		DATA RECORDS ARE OFFILE1-REC.		C98970
17200	01	OFFILE1-REC SYNC.		C98970
17210	02	FILLER	PICTURE X(40).	C98970
18100	FU	OFFILE1		C98970
18120		RECURRING MODE IS F		C98970
18130		BLOCK CONTAINS 90 RECORDS		C98970
18140		RECORD CONTAINS 30	CHARACTERS	C98970
18150		LABEL RECORDS ARE OMITTED		C98970
18160		DATA RECORDS ARE OBS-REC-CNT.		C98970
18200	01	OBS-REC-CNT SYNC.		C98970
18210	02	FILLER	PICTURE X(30).	C98970
30000		WORKING-STORAGE SECTION.		C98970
30100	01	BLNK-130 SYNC.		C98970
30110	02	FILLER	PICTURE X(129) VALUE SPACE.	C98970
30120	02	HK-MX	PICTURE X VALUE :#.	C98970
30200	01	PAGCNT	PICTURE 9999 SYNC VALUE ZERO.	C98970
30210	01	LINL-LNI	PICTURE 99 SYNC VALUE ZERO.	C98970
30220	01	LINL-MAX-62	PICTURE 99 SYNC VALUE 62.	C98970
30230	01	LINLS-OUT	PICTURE 9(6) SYNC VALUE 0.	C98970
30240	01	FREQ-CNT	PICTURE 9(6) SYNC VALUE 0.	C98970
30250	01	OBS-CNT	PICTURE 9(6) SYNC VALUE 0.	C98970
30260	01	EFLAG	PICTURE X SYNC VALUE :01.	C98970
30270	01	FREQEOF	PICTURE X SYNC VALUE :01.	C98970
30280	01	OBSEOF	PICTURE X SYNC VALUE :01.	C98970
30290	01	STATCNT	PICTURE 9(6) SYNC VALUE 0.	C98970
30310	01	RECORDS-HEAD	PICTURE 9(7) SYNC VALUE ZERO.	C98970
30320	01	RECORDS-PASS	PICTURE 9(7) SYNC VALUE ZERO.	C98970
30400	01	RCOUNT	PICTURE 9999 SYNC VALUE ZERO COMPUTATIONAL.	C98970
32000	01	REPORT-ID SYNC.		C98970
32010	02	FILLER	PICTURE X(50) VALUE	C98970
32020		:19897T60 TF7919-01 142-8 1 1/2	1.	C98970
32030	02	FILLER	PICTURE X(50) VALUE SPACE.	C98970
32040	02	FILLER	PICTURE X(30) VALUE	C98970
32050		:	#:.	C98970
42000	01	O-REC SYNC.		C98970
42010	02	FILLER	PICTURE XX VALUE SPACE.	C98970
42020	02	SN-U	PICTURE X(8) VALUE SPACE.	C98970
42030	02	IU-U	PICTURE X(6) VALUE SPACE.	C98970
42035	02	FILLER	PICTURE X VALUE SPACE.	C98970
42040	02	OU-1	PICTURE X(6).	C98970
42045	02	FILLER	PICTURE X VALUE SPACE.	C98970
42050	02	OU-2	PICTURE X(6).	C98970
42055	02	FILLER	PICTURE X VALUE SPACE.	C98970
42060	02	OU-3	PICTURE X(6).	C98970
42065	02	FILLER	PICTURE XX VALUE SPACE.	C98970
42070	02	RCO-MK-O	PICTURE X VALUE :#.	C98970
42300	01	O-PLC-CNT SYNC.		C98970
42310	02	FILLER	PICTURE XX VALUE SPACE.	C98970
42320	02	SN-U	PICTURE X(8).	C98970
42330	02	IU-U	PICTURE X(6).	C98970
42340	02	CNT-C	PICTURE X(6) VALUE :0000001.	C98970
42350	02	FILLER	PICTURE X VALUE SPACE.	C98970
42355	02	SN-OBS-CNT	PICTURE ZZZZ99 VALUE :0000001.	C98970
42360	02	RLD-MK-C	PICTURE X VALUE :#.	C98970
44000	01	TITLE-O SYNC.		C98970
44010	02	CAN-O	PICTURE X VALUE :#.	C98970
44020	02	FILLER	PICTURE X(45) VALUE SPACE.	C98970
44030	02	T-1-52-64	PICTURE X(16) VALUE :CORRELATION, RE01.	C98970
44040	02	T-1-65 85	PICTURE X(18) VALUE :SESSION STATISTICS.	C98970
44050	02	FILLER	PICTURE X(38) VALUE SPACE.	C98970
44060	02	PAGE-NO-O	PICTURE X(5) VALUE :PAGE 1.	C98970
44070	02	PAGE-C T	PICTURE ZZZ9.	C98970
44080	02	FILLER	PICTURE XX VALUE SPACE.	C98970
44090	02	T-O-RECMK	PICTURE X VALUE :#.	C98970
44100	01	TITLE-RLK SYNC.		C98970
44110	02	CAN-RL	PICTURE X VALUE SPACE.	C98970
44120	02	FILLER	PICTURE X(124) VALUE SPACE.	C98970
44130	02	T-RLK-RECMK	PICTURE X VALUE :#.	C98970
44200	01	TITLE-1 SYNC.		C98970
44210	02	CAN-1	PICTURE X VALUE SPACE.	C98970
44220	02	SN-H	PICTURE X(8).	C98970
44230	02	IU-H	PICTURE X(6).	C98970
44240	02	CC-H	PICTURE X(5) VALUE : CC> 1.	C98970
44250	02	CC-U-H	PICTURE -(7).9(5).	C98970
44260	02	A-H	PICTURE X(4) VALUE : A> 1.	C98970
44270	02	A-D-H	PICTURE -(8).9(5).	C98970
44280	02	B-H	PICTURE X(4) VALUE : B> 1.	C98970
44290	02	B-D-H	PICTURE -(8).9(5).	C98970
44300	02	SLH-H	PICTURE X(6) VALUE : SEN> 1.	C98970

44310	02	SEL-D-I	PICTURE -(8).9(5).		C98970
44320	02	SEL-R	PICTURE X(6)	VALUE I SEE> I.	C98970
44330	02	SEL-D-R	PICTURE -(8).9(5).		C98970
44340	02	F-H	PICTURE X(4)	VALUE I F> I.	C98970
44350	02	F-D-R	PICTURE -(8).9(5).		C98970
44360	02	FILLER	PICTURE X	VALUE SPACE.	C98970
44370	02	T-1-RECMK	PICTURE X	VALUE I#I.	C98970
44400	01	TITLE-2 SYNC.			C98970
44410	02	CAH-2	PICTURE X	VALUE SPACE.	C98970
44420	02	FILLEF	PICTURE X(14)	VALUE SPACE.	C98970
44430	02	XBAR-R	PICTURE X(7)	VALUE I XBAR> I.	C98970
44440	02	XBAR-D-R	PICTURE -(8).9(5).		C98970
44450	02	XSIG-R	PICTURE X(9)	VALUE I XSIGMA> I.	C98970
44460	02	XSIG-D-R	PICTURE -(8).9(5).		C98970
44470	02	YBAR-R	PICTURE X(7)	VALUE I YBAR> I.	C98970
44480	02	YBAR-D-R	PICTURE -(8).9(5).		C98970
44490	02	YSIG-R	PICTURE X(9)	VALUE I YSIGMA> I.	C98970
44500	02	YSIG-D-R	PICTURE -(8).9(5).		C98970
44510	02	N-H	PICTURE X(4)	VALUE I N> I.	C98970
44520	02	N-D-R	PICTURE ZZZZZZ.		C98970
44530	02	FILLEF	PICTURE X(16)	VALUE SPACE.	C98970
44540	02	T-2-RECMK	PICTURE X	VALUE I#I.	C98970
48000		LINKAGE SECTION.			C98970
48010	77	ISNOF	PICTURE S9(8)	COMPUTATIONAL SYNC.	C98970
48020	77	IDNOF	PICTURE S9(6)	COMPUTATIONAL SYNC.	C98970
48030	77	JFRELO	PICTURE S9(6)	COMPUTATIONAL SYNC.	C98970
48040	77	ISNO	PICTURE S9(8)	COMPUTATIONAL SYNC.	C98970
48050	77	IDO	PICTURE S9(6)	COMPUTATIONAL SYNC.	C98970
48060	77	IOB1	PICTURE S9(6)	COMPUTATIONAL SYNC.	C98970
48070	77	IOB2	PICTURE S9(6)	COMPUTATIONAL SYNC.	C98970
48080	77	IOB3	PICTURE S9(6)	COMPUTATIONAL SYNC.	C98970
48090	77	FSNS	PICTURE S9(8)	COMPUTATIONAL SYNC.	C98970
48100	77	FID	PICTURE S9(6)	COMPUTATIONAL SYNC.	C98970
48110	77	FCORR		COMPUTATIONAL-1 SYNC.	C98970
48120	77	FINTER		COMPUTATIONAL-1 SYNC.	C98970
48130	77	FSLUPE		COMPUTATIONAL-1 SYNC.	C98970
48140	77	FSTUEV		COMPUTATIONAL-1 SYNC.	C98970
48150	77	FSTDEL		COMPUTATIONAL-1 SYNC.	C98970
48160	77	FOULSI		COMPUTATIONAL-1 SYNC.	C98970
48170	77	FXBAR		COMPUTATIONAL-1 SYNC.	C98970
48180	77	FXSIG		COMPUTATIONAL-1 SYNC.	C98970
48190	77	FYBAR		COMPUTATIONAL-1 SYNC.	C98970
48200	77	FYSIG		COMPUTATIONAL-1 SYNC.	C98970
48210	77	IFRLO	PICTURE S9(6)	COMPUTATIONAL SYNC.	C98970
48220	77	ITI	PICTURE S9(6)	COMPUTATIONAL SYNC.	C98970
50000		PROCEDURE DIVISION.			C98970
50010		STATS-IN.			C98970
50020		ENTRY :COBFRO: USING ISNOF, IDNOF, JFRELO.			C98970
50030		IF EFLAG EQUAL I1: GO TO FREQ-IN.			C98970
50040		OPEN INPUT OFILECNT OFILE1.			C98970
50050		OPEN OUTPUT STATREPORT.			C98970
50060		MOVE I1: TO EFLAG.			C98970
50062		WRITE STAT-REC FROM REPORT-ID.			C98970
50064		ADD I TO LINES-OUT.			C98970
50070		PERFORM PAGE-FLIP THRU PAGE-FLIP-EXIT.			C98970
55100		FREQ-IN.			C98970
55110		PERFORM READ-FREQ THRU READ-FREQ-EXIT.			C98970
55120		IF FREQLOF EQUAL I11 GO TO FREQ-EXIT.			C98970
55130		AND I TO FREQ-CNT.			C98970
55140		MOVE-LINK-FREQ.			C98970
55150		MOVE SN-C TO ISNOF.			C98970
55160		MOVE ID-C TO IDNOF.			C98970
55170		MOVE CNT-1 TO JFRELO.			C98970
55200		FREQ-EXIT.			C98970
55210		GORACK.			C98970
56010		OBSERVATIONS-IN.			C98970
56020		ENTRY :IOB0BS: USING ISNO, IDO, IOB1, IOB2, IOB3.			C98970
56030		OBS-IN.			C98970
56040		PERFORM READ-OBS THRU READ-OBS-EXIT.			C98970
56050		IF OBSLOF EQUAL I1: GO TO OBS-EXIT.			C98970
56060		ADD I TO OBS-CNT.			C98970
56070		MOVE-LINK-OBS.			C98970
56080		MOVE SN-O TO ISNO.			C98970
56090		MOVE ID-O TO IDO.			C98970
56100		MOVE OB-1 TO IOB1.			C98970
56110		MOVE OB-2 TO IOB2.			C98970
56120		MOVE OB-3 TO IOB3.			C98970
56200		OBS-EXIT.			C98970
56210		GORACK.			C98970
57000		REPORT-OUT.			C98970
57010		ENTRY :COBOT2: USING FSNS, FID, FCORR, FINTER, FSLUPE,			C98970
57020		FSTUEV, FSTDEL, FQUEST, FXBAR, FXSIG, FYBAR, FYSIG,			C98970
57030		IFRLO.			C98970
57040		WRITE STAT-REC FROM TITLE-BLK.			C98970
57050		LINK-1.			C98970
57060		MOVE FSNS TO SN-R.			C98970
57070		MOVE FID TO ID-R.			C98970

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57080      MOVL FCGRR TO CC-D-R.          C98970
57090      MOVE FINER TO A-D-R.          C98970
57100      MOVE FSLOPE TO B-D-R.         C98970
57110      MOVE FSLOEV TO SER-D-R.       C98970
57120      MOVL FSTJEF TO SEE-D-R.       C98970
57130      MOVL FOUTST TO F--R.          C98970
57150      WRITE STAT-REC FROM TITLE-1.   C98970
57160      LINE-2.                        C98970
57170      MOVE FXU R TO XBAR-D-R.        C98970
57180      MOVE FXSIG TO XSIG-D-R.        C98970
57190      MOVL FYUAR TO YBAR-D-R.        C98970
57200      MOVE FYSIG TO YSIG-D-R.        C98970
57210      MOVL IFHTQ TO N-D-R.           C98970
57220      WRITE STAT-REC FROM TITLE-2.   C98970
57225      ADD 1 TO STATCNT.               C98970
57230      ADD 3 TO LINE-CNT LINES-OUT.   C98970
57240      IF LINE-CNT EQUAL LINE-MAX-62 C98970
57250          PERFORM PAGE-FLIP THRU PAGE-FLIP-EXIT. C98970
57300      REPORT-OUT-LATT.               C98970
57310      GOBACK.                       C98970
59000      READ-FREQ.                    C98970
59010          READ OFILECNT INTO O-REC-CNT C98970
59020              AT END GO TO FREQ-EOF. C98970
59030          IF SN-C EQUAL :99999999: MOVE SN-C TO ISNOF C98970
59040              GO TO FREQ-LOF.         C98970
59050          GO TO READ-FREQ-EXIT.       C98970
59060      FREQ-EOF.                      C98970
59080          MOVL :1: TO FREQEOF.        C98970
59100      READ-FREQ-EXIT.               C98970
59200      READ-OPS.                     C98970
59210          READ OFILE1 INTO O-REC      C98970
59220              AT END GO TO OBS-EOF.   C98970
59230          IF SN-O EQUAL :99999999: MOVE SN-O TO ISNO C98970
59240              GO TO OBS-EOF.           C98970
59250          GO TO READ-OPS-EXIT.        C98970
59260      OBS-EOF.                      C98970
59280          MOVL :1: TO OBS-EOF.         C98970
59300      READ-OPS-EXIT.                 C98970
59400      PAGE-FLIP.                    C98970
59405          MOVL ZLNO TO LINE-CNT.      C98970
59410          ADD 1 TO PAGECNT.            C98970
59420          MOVL PAGECNT TO PAGE-CNT.   C98970
59422          WRITE STAT-REC FROM TITLE-BLK. C98970
59424          WRITE STAT-REC FROM TITLE-BLK. C98970
59426          ADD 2 TO LINES-OUT.         C98970
59430          WRITE STAT-REC FROM TITLE-0. C98970
59440          WRITE STAT-REC FROM TITLE-BLK. C98970
59450          ADD 2 TO LINE-CNT LINES-OUT. C98970
59490      PAGE-FLIP-EXIT.               C98970
61000      BLOCK-CHECK.                  C98970
61010          ENTRY :CLOSE: USING IT1.    C98970
61020          COMPUTE KOUNT > LINES-OUT - [(LINES-OUT / 15) * 15]. C98970
61030      LOOP3.                        C98970
61040          WRITE STAT-REC FROM TITLE-BLK. C98970
61050          ADD 1 TO KOUNT.               C98970
61060          IF KOUNT IS LESS THAN 15 GO TO LOOP3. C98970
64000      CLOSE-FILES.                  C98970
64010          CLOSE OFILECNT OFILE1 STATREPORT WITH LOCK. C98970
64020          DISPLAY : FREQ-IN : FREQ-CNT UPON CONSOLE. C98970
64030          DISPLAY : OBS -IN : OBS-CNT UPON CONSOLE. C98970
64040          DISPLAY : STATS-0 : STATCNT UPON CONSOLE. C98970
64050          DISPLAY : EOU 9897: UPON CONSOLE. C98970
64060          GOBACK.                     C98970
/*
//CHG.SYSIN DD DATA,SPACE>[TRK,(1,1)]
NAME C877SERJ
/*
//C98970 EXEC P96,56,PARM,ASSY>[MAP,LIST,BCD],
//
//PARM.LKED>:LIST,XREF:TIME>04,ACCT>D35323007
//ASSY.SYSIN DD DATA,SPACE>[CYL,(1,1)]
C      FORTRAN-CUBOL LINK TEST, JOHN LINK, KELLY B.
C      27 APRIL 1972
C      THIS IS THE DRIVER TO CALCULATE THE STATISTICS
DIMENSION X(10000),XBAR(2),STD(2),SKEW(2),CURT(2),C(2),S(4),B(4),
I A(4),N(4),F(4),IDATA(3),IDI(2),ID2(2)
DIMENSION U(2)
INTEGER OFILE1,OFILE2,OUT
L = 2
NVAR = 2
MAX = 5000
BAD(1) = -9999.
BAD(2) = -9999.
MIN = 4
C      READ FREQUENCY TAPE
10 CONTINUE
CALL CORFRQ (IDI(1),IDI(2),NUMBER)

```

C  
1440 CDS

```

C      CHECK FOR BLOCKING FLAG
      IF (ID1(1) - 9999999) 20,1000,1000
20    CONTINUE
C      CHECK FOR MINIMUM NUMBER OF OBSERVATIONS
      IF (NUMBER - MIN) 10,30,30
C      CHECK FOR MAXIMUM NUMBER OF OBSERVATIONS
30    IF (NUMBER - MAX) 40,40,800
40    NSKIP = 0
C      READ OBSERVATION TAPE AND POSITION IT
300   CONTINUE
      CALL COBORS (ID2(1),ID2(2),IDATA(1),IDATA(2),IDATA(3))
C      CHECK ID ON OBSERVATION TAPE VS ID ON FREQUENCY TAPE
      IF (ID1(1) - ID2(1)) 10,310,300
310   IF (ID1(2) - ID2(2)) 10,320,300
320   CONTINUE
C      DO FIRST POINT
      IF (IDATA(2)) 325,322,325
322   CONTINUE
      IDATA(2) = 1
325   CONTINUE
      X(1) = FLOAT (IDATA(1))/FLOAT(IDATA(2))
      J=NUMBER+1
      A(J) = FLOAT(IDATA(3)) / 10.0
      DO 340 I=2,NUMBER
      IF (NSKIP) 310,380,350
350   DO 360 K = 1,NSKIP
360   CALL COBORS (ID2(1),ID2(2),IDATA(1),IDATA(2),IDATA(3))
C      HEAD IN OBSERVATIONS
380   CONTINUE
      CALL COBORS (ID2(1),ID2(2),IDATA(1),IDATA(2),IDATA(3))
      IF (IDATA(2)) 385,382,385
382   CONTINUE
      IDATA(2) = 1
385   CONTINUE
      X(1) = FLOAT(IDATA(1))/FLOAT(IDATA(2))
      J = NUMBER + 1
      A(J) = FLOAT(IDATA(3)) / 10.0
390   CONTINUE
C      DO DATA CORRELATION AND REGRESSION ANALYSIS
      CALL MISH (NUMBER,NVAR,X,BAD,XBAR,STD,SKEW,CURT,R,N,A,B,S,IER)
      IF (IER) 500,405,500
405   CONTINUE
      CALL SEESUB (N ,STD,R,L,SEE,F)
C      WRITE STATISTICS
407   CONTINUE
      CALL COPUT2
      * (ID1(1),ID1(2),R(L),A(L),B(L),S(L),SEE,F,XBAR(2),STD(2),XBAR(1),
      * STD(1),NUMBER)
C      GO TO READ IN NEXT FREQUENCY
      GO TO 10
500   CONTINUE
      R(L) = 0.0
      A(L) = 0.0
      B(L) = 0.0
      S(L) = 0.0
      SEE = 0.0
      F = 0.0
      STD(1) = 0.0
      STD(2) = 0.0
      GO TO 407
800   CONTINUE
      NSKIP = NUMBER / MAX
      NUMBER = NUMBER / (NSKIP + 1)
      GO TO 300
1000  CONTINUE
C      CLOSE ALL FILES
      IT1 = 0
      CALL CLOSEF (IT1)
      CALL EOJMSG
      CALL EXIT
      END
      SUBROUTINE MISR (NO,M,X,CODE,XBAR,STD,SKEW,CURT,R,N,A,B,S,IER)
      DETAIL LEVEL STATISTICAL ANALYZER = SUB MISR
C
C      FOR A DESCRIPTION OF MISR USAGE AND EXPLANATION OF TERMS,
C      SEE THE SS-7360 MANUAL.
C
      DIMENSION X(1),CODE(1),XBAR(1),STD(1),SKEW(1),CURT(1),R(1),N(1)
      DIMENSION A(1),B(1),S(1)
C
C      COMPUTE MEANS

```

```

MISR  0
MISR 10
MISR 20
MISR 30
MISR 40
MISR 50
MISR 60
MISR 70
MISR 80

```

C	IER=0	MISR 90
	L=0	MISR 100
	DO 50 J=1,M	MISR 110
	FN=0.0	MISR 120
	XBAR(J)=0.0	MISR 130
	DO 20 I=1,N0	MISR 140
	L=L+1	MISR 150
	IF (X(L)-CUDL(J)) 10,20,10	MISR 160
10	FN=FN+1.0	MISR 170
	XBAR(J)=XBAR(J)+X(L)	MISR 180
20	CONTINUE	MISR 190
	IF (FN) 30,3,40	MISR 200
30	XBAR(J)=0.0	MISR 210
	GO TO 50	MISR 220
40	XBAR(J)=XBAR(J)/FN	MISR 230
50	CONTINUE	MISR 240
C		MISR 250
C	SET-UP WORK AREAS AND TEST WHETHER DATA IS MISSING	MISR 260
C		MISR 270
	L=0	MISR 280
	DO 260 J=1,M	MISR 290
	LJJ=N0*(J-1)	MISR 300
	SKEW(J)=0.0	MISR 310
	CURT(J)=0.0	MISR 320
	KI=M*(J-1)	MISR 330
	KJ=J-M	MISR 340
	DO 250 I=1,J	MISR 350
	KI=KI+1	MISR 360
	KJ=KJ+M	MISR 370
	SUMX=0.0	MISR 380
	SUMY=0.0	MISR 390
	TI=0.0	MISR 400
	TJ=0.0	MISR 410
	TII=0.0	MISR 420
	TJJ=0.0	MISR 430
	TIJ=0.0	MISR 440
	NIJ=0	MISR 450
	LI=N0*(I-1)	MISR 460
	LJ=LJJ	MISR 470
	L=L+1	MISR 480
	DO 90 K=1,N0	MISR 490
	LI=LI+1	MISR 500
	LJ=LJ+1	MISR 510
	IF (X(LI)-C0UE(I)) 60,90,60	MISR 520
60	IF (X(LJ)-C0UE(J)) 70,90,70	MISR 530
C		MISR 540
C	BOTH DATA ARE PRESENT	MISR 550
C		MISR 560
	70 XX=X(LI)-XBAR(I)	MISR 570
	YY=X(LJ)-XBAR(J)	MISR 580
	TI=TI+XX	MISR 590
	TII=TII+XX**2	MISR 600
	TJ=TJ+YY	MISR 610
	TJJ=TJJ+YY**2	MISR 620
	TIJ=TIJ+XX*YY	MISR 630
	NIJ=NIJ+1	MISR 640
	SUMX=SUMX+X(LI)	MISR 650
	SUMY=SUMY+X(LJ)	MISR 660
	IF (I-J) 90,80,80	MISR 670
80	SKEW(J)=SKEW(J)+YY**3	MISR 680
	CURT(J)=CURT(J)+YY**4	MISR 690
90	CONTINUE	MISR 700
C		MISR 710
C	COMPUTE SUM OF CROSS-PRODUCTS OF DEVIATIONS	MISR 720
C		MISR 730
	IF (NIJ) 110,110,100	MISR 740
100	FN=NIJ	MISR 750
	M(L)=TIJ-TI*T/FN	MISR 760
	N(L)=NIJ	MISR 770
	TII=TII-TI*TI/FN	MISR 780
	TJJ=TJJ-TJ*TJ/FN	MISR 790
C		MISR 800
C	COMPUTE STANDARD DEVIATION, SKEWNESS, AND KURTOSIS	MISR 810
C		MISR 820
110	IF (I-J) 180, 20,180	MISR 830
120	IF (NIJ-2) 130,130,140	MISR 840
130	IER=1	MISR 850
	M(L)=1.0L75	MISR 860
	A(KI)=1.0E75	MISR 870
	B(KI)=1.0E75	MISR 880
	S(KI)=1.0E75	MISR 890
	GO TO 160	MISR 900
		MISR 910

C	140 STD(J)=R(L)	MISR 920
	R(L)=1.0	MISR 930
	A(K1)=0.0	MISR 940
	B(K1)=1.0	MISR 950
	S(K1)=0.0	MISR 960
C	IF (STD(J)-(1.0E-20)) 150,150,170	MISR 970
150	IER=2	MISR 980
160	STD(J)=1.0E75	MISR 990
	SKLW(J)=1.0E75	MISR1000
	CUKT(J)=1.0E75	MISR1010
	GO TO 260	MISR1020
C	170 WORK=STD(J)/FN	MISR1030
	SKLW(J)=(SKLW(J)/FN)/(WORK*SQRT(WORK))	MISR1040
	CUKT(J)=((CUKT(J)/FN)/WORK**2)-3.0	MISR1050
	STD(J)=SQRT(STD(J)/(FN-1.0))	MISR1060
	GO TO 260	MISR1070
C	COMPUTE REGRESSION COEFFICIENTS	MISR1080
C		MISR1090
180	IF (N1J-2) 190,190,210	MISR1100
190	IER=1	MISR1110
200	R(L)=1.0E75	MISR1120
	A(K1)=1.0E75	MISP1130
	B(K1)=1.0E75	MISR1140
	S(K1)=1.0E75	MISR1150
	A(KJ)=1.0E75	MISR1160
	B(KJ)=1.0E75	MISR1170
	S(KJ)=1.0E75	MISR1180
	GO TO 250	MISR1190
C	210 IF (T11-(1.0E-0)) 230,230,220	MISR1200
220	IF (TJJ-(1.0E-20)) 230,230,240	MISP1210
230	IER=2	MISR1220
	GO TO 200	MISP1230
C	240 SUMX=SUMX/FN	MISR1240
	SUMY=SUMY/FN	MISR1250
	B(K1)=R(L)/T11	MISP1260
	A(KJ)=SUMY-B(K1)*SUMX	MISR1270
	B(KJ)=R(L)/TJJ	MISR1280
	A(KJ)=SUMX-B(KJ)*SUMY	MISP1290
C	COMPUTE CORRELATION COEFFICIENTS	MISR1300
C		MISP1310
	R(L)=R(L)/(SQRT(T11)*SQRT(TJJ))	MISR1320
C	COMPUTE STANDARD ERRORS OF REGRESSION COEFFICIENTS	MISR1330
C		MISR1340
	RR=R(L)**2	MISR1350
	SUMX=(TJJ-TJJ*RR)/(FN-2)	MISR1360
	S(K1)=SQRT(SUMX/T11)	MISR1370
	SUMY=(T11-T11*RR)/(FN-2)	MISR1380
	S(KJ)=SQRT(SUMY/TJJ)	MISR1390
C	250 CONTINUE	MISR1400
260	CONTINUE	MISR1410
C	RETURN	MISR1420
	END	MISR1430
	SUBROUTINE SEE,UD (N, STD, R, K, SEE, F)	MISR1440
C	DETAIL LEVEL STATISTICAL ANALYZER = SUB SEESUM	MISR1450
C		MISR1460
C	SUB TO COMPUTE STD ERROR OF ESTIMATE AND F LEVEL.	MISR1470
C		MISR1480
	DIMENSION N(1), R(1)	MISR1490
	SEE = 0.0	MISR1500
	F = 0.0	MISR1510
	FN = N(K)	MISR1520
	IF (R(K) = 1.1) 5,5,20	MISR1530
5	TEMP = 1.0 - R(K)*R(K)	MISR1540
	IF (TEMP) 20,20,10	MISR1550
10	SEE = STD * SQRT (TEMP)	SEEB 10
	F = R(K)*R(K) * (FN-2.0) / TEMP	SEEB 20
20	RETURN	SEEB 30
	END	SEEB 40
	/* REQUIRED PLACE FORTRAN UCD SOURCE BEFORE THIS CARD	SEEB 50
//LKED.ADCALL	DU USN>P&ML18,DISP>SHR,VOL>SER>111,UNIT>DSK	SEEB 60
//LKED.SYSIN	DU D,TA,SPACE>[TRK,[5,5]]	SEEB 70
	INCLUDE ADUCAL LC877S]	SEEB 90
	/* REQUIRED PLACE LINKEDIT CONTROL CARDS IF ANY BEFORE THIS CARD	SEEB 100
//CHG.FTU1F001	DU LISP>[PASS],UNIT>[A+F1,2,DEFER],DSN>A.9897411,	SEEB 110
//	VOL>SER>[+F1,A+F1,H+F1,C+F1,D+F1,E+F1,F+F1,G+F1,H+F1,	SEEB 120
//	1+F1, +F1,K+F1,L+F1,M+F1,N+F1,O+F1,P+F1,Q+F1,R+F1,S+F1]	SEEB 130
		SEEB 140
		360 CDS
		CT12/13 1
		CT12 2
		T12 3

```

//CHG.F110F001 CU DISP(L,PASS I,UNIT)(T+F7,1,DEFER),DSN>G,9897414, CT24 1
// VOL>SER I(+F7,A+F7,B+F7,C+F7,D+F7,E+F7,F+F7,G+F7,H+F7, CT24 2
// I(+F7,J+F7,K+F7,L+F7,M+F7,N+F7,O+F7,P+F7,Q+F7,R+F7,S+F7) T24 3
//CHG.F111F001 CU DISP(L,PASS I,UNIT)(T+F8,1,DEFER),DSN>H,9897425, CT25 1
// VOL>SER I(+F8,A+F8,B+F8,C+F8,D+F8,E+F8,F+F8,G+F8,H+F8, CT25 2
// I(+F8,J+F8,K+F8,L+F8,M+F8,N+F8,O+F8,P+F8,Q+F8,R+F8,S+F8) T25 3
//
//C9897U EXEC C9897U,TIME>02,ACCT>D35323007 STDALONE JOHN LINK
//CHG.TU12 DD DISP(L,PASS I,UNIT)(A+F1,2,DEFER),DSN>A,9897411, CT12/13 1
// VOL>SER I(+F1,A+F1,B+F1,C+F1,D+F1,E+F1,F+F1,G+F1,H+F1, CT12 2
// I(+F1,J+F1,K+F1,L+F1,M+F1,N+F1,O+F1,P+F1,Q+F1,R+F1,S+F1) T12 3
//CHG.TU24 DD DISP(L,PASS I,UNIT)(T+F7,1,DEFER),DSN>G,9897414, CT24 1
// VOL>SER I(+F7,A+F7,B+F7,C+F7,D+F7,E+F7,F+F7,G+F7,H+F7, CT24 2
// I(+F7,J+F7,K+F7,L+F7,M+F7,N+F7,O+F7,P+F7,Q+F7,R+F7,S+F7) T24 3
//CHG.TU25 DD DISP(L,PASS I,UNIT)(T+F8,1,DEFER),DSN>H,9897425, CT25 1
// VOL>SER I(+F8,A+F8,B+F8,C+F8,D+F8,E+F8,F+F8,G+F8,H+F8, CT25 2
// I(+F8,J+F8,K+F8,L+F8,M+F8,N+F8,O+F8,P+F8,Q+F8,R+F8,S+F8) T25 3
//CHG.TPRIN DD *SPACE>(TRK,(1,1))
T/P TU25 1998130R000
T/P TU24 1002030Z30
T/P TU12 1002040Z140
// PLACE T/P CONTROL CARDS BEFORE THIS CARD
//C9897U EXEC C9897U,TIME>02,ACCT>D35323007 STDALONE JOHN LINK
//CHG.TU12 DD DISP(L,KEEP I,UNIT)(A+F1,2,DEFER),DSN>A,9897411, CT12/13 1
// VOL>SER I(+F1,A+F1,B+F1,C+F1,D+F1,E+F1,F+F1,G+F1,H+F1, CT12 2
// I(+F1,J+F1,K+F1,L+F1,M+F1,N+F1,O+F1,P+F1,Q+F1,R+F1,S+F1) T12 3
//CHG.TU24 DD DISP(L,KEEP I,UNIT)(T+F7,1,DEFER),DSN>G,9897414, CT24 1
// VOL>SER I(+F7,A+F7,B+F7,C+F7,D+F7,E+F7,F+F7,G+F7,H+F7, CT24 2
// I(+F7,J+F7,K+F7,L+F7,M+F7,N+F7,O+F7,P+F7,Q+F7,R+F7,S+F7) T24 3
//CHG.TU25 DD DISP(L,KEEP I,UNIT)(T+F8,1,DEFER),DSN>H,9897425, CT25 1
// VOL>SER I(+F8,A+F8,B+F8,C+F8,D+F8,E+F8,F+F8,G+F8,H+F8, CT25 2
// I(+F8,J+F8,K+F8,L+F8,M+F8,N+F8,O+F8,P+F8,Q+F8,R+F8,S+F8) T25 3
//CHG.IPRIN DD *SPACE>(TRK,(1,1))
T/P TU25 1998130R000
T/P TU24 1002030Z30
T/P TU12 1002040Z40
// PLACE T/P CONTROL CARDS BEFORE THIS CARD

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## 6.10.8 TREND ANALYSIS

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//C9897E JOB 01: G. WANG 1,PRTY>02,TPPRUN>HOLD TASK 4 TREND ANAL
//C9897E EXEC P9897E,TIME>10,ACCT>D35323007
//CHG.TU12 DD DISP(L,PASS I,UNIT)(T+F1,1,DEFER),DSN>A,9897414, CT12 1
// VOL>SER I(+F1,A+F1,B+F1,C+F1,D+F1,E+F1,F+F1,G+F1,H+F1, CT12 2
// I(+F1,J+F1,K+F1,L+F1,M+F1,N+F1,O+F1,P+F1,Q+F1,R+F1,S+F1) T12 3
//CHG.TU14 DD DISP(L,PASS I,UNIT)(A+F3,2,DEFER),DSN>C,9897411, CT14/15 1
// VOL>SER I(+F3,A+F3,B+F3,C+F3,D+F3,E+F3,F+F3,G+F3,H+F3, CT14 2
// I(+F3,J+F3,K+F3,L+F3,M+F3,N+F3,O+F3,P+F3,Q+F3,R+F3,S+F3) T14 3
//CHG.TU22 DD DISP(L,PASS I,UNIT)(A+F5,2,DEFER),DSN>E,9897415, CT22/23 1
// VOL>SER I(+F5,A+F5,B+F5,C+F5,D+F5,E+F5,F+F5,G+F5,H+F5, CT22 2
// I(+F5,J+F5,K+F5,L+F5,M+F5,N+F5,O+F5,P+F5,Q+F5,R+F5,S+F5) T22 3
//CHG.INPUT DD *SPACE>(CYL,(1,1)) 1440 CDS
UN000 COMBINE COMPILE G. WANG. C98970
01000 IDENTIFICATION DIVISION. C98970
01010 PROGRAM-10. C98970
01020 AUTHOR, A. J. R WKEH C98970
01030 INSTALLATION, GENERAL DYNAMICS/CONVAIR. C98970
01040 DATE-WRITTEN, 5 MAY 72. C98970
01050 REMARKS. C98970
02000 ENVIRONMENT DIVISION. C98970
02010 CONFIGURATION SECTION. C98970
02020 SOURCE-COMPUTER, IBM-360. C98970
02030 OBJECT-COMPUTER, IBM-360. C98970
02100 INPUT-OUTPUT SECTION. C98970
02110 FILE-CONTROL. C98970
02120 SELECT ORG-FILE ASSIGN TO UT-S-TU14 C98970
02130 RESERVE 1 ALTERNATE AREA. C98970
02140 SELECT FREQ-FILE ASSIGN TO UT-S-TU12 C98970
02150 RESERVE 1 ALTERNATE AREA. C98970
02160 SELECT REPO-T-FILE ASSIGN TO UT-S-TU22 C98970
02170 RESERVE 1 ALTERNATE AREA. C98970
03200 SELECT REP-AXIS-FILE ASSIGN TO UT-S-TU13 C98970
03210 RESERVE 1 ALTERNATE AREA. C98970
10000 DATA DIVISION. C98970
10010 FILE SECTION. C98970
11100 FU FREQ-FILE C98970
11120 RECORDING NAME IS F C98970
11130 BLOCK CONTAINS 40 RECORDS C98970
11140 RECORD CONTAINS 30 CHARACTERS C98970
11150 LABEL RECORDS ARE OMITTED C98970
11160 DATA RECORDS ARE FREQ-REC, C98970
11170 01 FREQ-REC SYNC. C98970

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31300 01 FILLER SYNC. C98970
31310 02 FILLER OCCURS 200 TIMES. C98970
31320 03 IND-VALUE PICTURE S9(6). C98970
31330 03 DEF-VALUE PICTURE S9(5)V9(4). C98970
31400 01 PLOT-TITLE SYNC. C98970
31410 02 FILLER PICTURE X(22) VALUE C98970
31420 :1 CURRENT IDENT :. C98970
31430 02 CUR-ID PICTURE X(16) VALUE SPACE. C98970
31440 02 FILLER PICTURE X(85) VALUE SPACE. C98970
31450 02 FILLER PICTURE X(4) VALUE :PAGE1. C98970
31460 02 PAGE-H-RPT PICTURE Z9. C98970
31470 02 FILLER PICTURE X VALUE 1#1. C98970
31600 01 DEP-AXIS SYNC. C98970
31610 02 FILLER PICTURE X(14) VALUE SPACE. C98970
31620 02 DEP-MIN-RPT PICTURE ZZZZ9.999. C98970
31630 02 FILLER PICTURE X(11) VALUE SPACE. C98970
31640 02 DEP-1-RPT PICTURE ZZZZ9.999. C98970
31650 02 FILLER PICTURE X(11) VALUE SPACE. C98970
31660 02 DEP-2-RPT PICTURE ZZZZ9.999. C98970
31670 02 FILLER PICTURE X(11) VALUE SPACE. C98970
31680 02 DEP-3-RPT PICTURE ZZZZ9.999. C98970
31690 02 FILLER PICTURE X(11) VALUE SPACE. C98970
31700 02 DEP-4-RPT PICTURE ZZZZ9.999. C98970
31710 02 FILLER PICTURE X(11) VALUE SPACE. C98970
31720 02 DEP-MAX-RPT PICTURE ZZZZ9.999. C98970
31730 02 FILLER PICTURE X(7) VALUE C98970
31740 : :. C98970
31800 01 DEP-LINE SYNC. C98970
31810 02 FILLER PICTURE X(50) VALUE C98970
31820 : :-----|-----|-----|1. C98970
31830 02 FILLER PICTURE X(50) VALUE C98970
31840 : :-----|-----|-----|1. C98970
31850 02 FILLER PICTURE X(30) VALUE C98970
31860 : :-----|-----| :. C98970
31900 01 PLOT-LINE SYNC. C98970
31910 02 FILLER PICTURE X(8) VALUE SPACE. C98970
31920 02 IND-OUT PICTURE X. C98970
31930 02 FILLER PICTURE X(2) VALUE SPACE. C98970
31940 02 WEEK-RPT PICTURE ZZZZ9. C98970
31950 02 FILLER PICTURE XX VALUE SPACE. C98970
31955 02 IND-AXIS-SYMB PICTURE X VALUE 11. C98970
31960 02 OUTPUT-LINE OCCURS 100 TIMES C98970
31970 PICTURE X. C98970
31980 02 FILLER PICTURE X(10) VALUE C98970
31990 : :. C98970
33000 01 REPORT-ID SYNC. C98970
33010 02 FILLER PICTURE X(50) VALUE C98970
33020 :$0897C60 TF7919-01 142-8 1 1/2 C98970
33030 02 FILLER PICTURE X(50) VALUE SPACE. C98970
33040 02 FILLER PICTURE X(30) VALUE C98970
33050 : :. C98970
35000 01 FILLER SYNC. C98970
35010 02 DEP-AXIS-LIST OCCURS 15 TIMES C98970
35020 PICTURE X(80). C98970
35060 01 CUT-OFF-REL SYNC. C98970
35070 05 CUT-OFF PICTURE 9(5). C98970
35080 05 FILLER PICTURE X(75). C98970
50000 PROCEDURE DIVISION. C98970
50010 OPEN INPUT OPS-FILE. C98970
50020 FREQ-FILE. C98970
50025 DEP-AXIS-FILE. C98970
50030 OUTPUT REPORT-FILE. C98970
50040 MOVE 200 TO IND-CNT. C98970
50050 PERFORM READ-DEP-AXIS THRU END-RDA. C98970
50070 WRITE PLOT-REC FROM REPORT-ID. C98970
50100 READ-FREQ-FILE. C98970
50110 READ FREQ-FILE, AT END GO TO FREQ-ERROR. C98970
50115 IF FREQ-IDENT IS EQUAL TO NINE GO TO FREQ-ERROR. C98970
50120 COMPUTE OBS-FACTOR > (FREQ-ORS < 4999) / 5000. C98970
50130 IF FREQ-IND-VAR IS EQUAL TO :1: PERFORM SET-WEEKS. C98970
50140 IF FREQ-IND-VAR IS EQUAL TO 12: PERFORM SET-FLT-HRS. C98970
50150 IF FREQ-IND-VAR IS EQUAL TO :3: PERFORM SET-SORTIES. C98970
50160 IF FREQ-IND-VAR IS EQUAL TO :4: PERFORM SET-LANDING. C98970
50170 COMPUTE MAY-ALLOW-IND > 200 * IND-INT. C98970
50190 MOVE IND-INT TO TEMP. C98970
50200 MOVE ZERO TO SOM. C98970
50210 MOVE ZERO TO NO-OF-ORS. C98970
50220 PERFORM SET-DEP-TITLE THRU END-SOT. C98970
50230 PERFORM RESET-TABLE THRU END-R-T. C98970
50240 MOVE 1 TO IND-CNT. C98970
50250 MOVE IND-INT TO IND-VALUE (IND-CNT). C98970
50300 READ-OPS-FILE. C98970
50305 IF START-FLAG IS EQUAL TO :1: MOVE SPACE TO START-FLAG. C98970
50306 GO TO OFA. C98970
50310 MOVE ZERO TO OBS-CNT. C98970
50320 REF. C98970

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50330      HEAD OBS-F.LE, AT END GO TO CF-2.                                C98970
50335      IF OBS-IDENT IS EQUAL TO NINE GO TO CF-2.                      C98970
50340      ADD 1 TO OBS-CNT.                                                C98970
50350      IF OBS-CNT IS LESS THAN OBS-FACTOR GO TO ROF.                  C98970
50360      ROF.                                                            C98970
50400      IF OBS-IDENT IS EQUAL TO FREQ-IDENT,                          C98970
50410      GO TO CURRENT-DATA.                                            C98970
50415      IF NO-OF-OBS IS EQUAL TO ZERO GO TO FILL-IND-VALUE.          C98970
50416      COMPUTE DEP-VALUE (IND-CNT) > SOM / NO-OF-OBS.                C98970
50420      FILL-IND-VALUE.                                                C98970
50430      IF IND-CNT IS GREATER THAN 49 GO TO SET-PLOT.                 C98970
50440      ADD 1 TO IND-CNT, ADD IND-INT TO TEMP.                        C98970
50450      MOVE TEMP 'O IND-VALUE (IND-CNT) GO TO FILL-IND-VALUE.        C98970
50460      SET-PLOT. PLRFORM PLOT-DATA THRU END-PD.                      C98970
50470      GO TO HEAD-FREQ-FILE.                                          C98970
51000      PLOT-DATA.                                                    C98970
51004      IF FREQ-OBS IS LESS THAN CUTOFF GO TO END-PD.                C98970
51010      MOVE ZERO TO PAGE-NO.                                          C98970
51020      MOVE 99900 TO MIN-DEP-VALUE.                                  C98970
51030      MOVE ZERO 'O CNT.                                              C98970
51040      MOVE ZERO 'O MAX-DEP-VALUE.                                    C98970
51050      MOVE 111 TO START-FLAG.                                       C98970
51100      FIND-MIN-MAX.                                                 C98970
51110      ADD 1 TO CNT.                                                  C98970
51120      MOVE DEP-VALUE (CNT) TO TEMP-LOC.                             C98970
51125      IF TEMP-LOC IS EQUAL TO NONE, GO TO NEXT-VALUE.              C98970
51130      IF TEMP-LOC IS GREATER THAN MAX-DEP-VALUE,                   C98970
51140      MOVE TEMP-LOC TO MAX-DEP-VALUE.                                C98970
51150      IF TEMP-LOC IS LESS THAN MIN-DEP-VALUE,                      C98970
51160      MOVE TEMP-LOC TO MIN-DEP-VALUE.                                C98970
51210      NEXT-VALUE.                                                   C98970
51270      IF CNT IS LESS THAN IND-CNT GO TO FIND-MIN-MAX.              C98970
51280      IF MAX-DEP-VALUE IS EQUAL TO ZERO GO TO END-PD.               C98970
51282      IF MAX-DEP-VALUE IS NOT LESS THAN 10, GO TO HUND-SCALE.      C98970
51284      MOVE ZERO 'O MIN-DEP-VALUE.                                   C98970
51286      IF MAX-DEP-VALUE IS NOT LESS THAN 1,                          C98970
51288      MOVE 10 TO MAX-DEP-VALUE. GO TO COMPUTE-INTERVAL.            C98970
51290      IF MAX-DEP-VALUE IS NOT LESS THAN 0.1,                       C98970
51292      MOVE 1 TO MAX-DEP-VALUE. GO TO COMPUTE-INTERVAL.             C98970
51294      IF MAX-DEP-VALUE IS NOT LESS THAN 0.01,                      C98970
51296      MOVE 0.1 TO MAX-DEP-VALUE. GO TO COMPUTE-INTERVAL.           C98970
51298      MOVE 0.01 TO MAX-DEP-VALUE.                                   C98970
51299      COMPUTE-INTERVAL.                                              C98970
51300      COMPUTE DEP-INTERVAL > (MAX-DEP-VALUE - MIN-DEP-VALUE) / 100. C98970
51310      COMPUTE DEP-1 > MIN-DEP-VALUE < (DEP-INTERVAL * 20).        C98970
51320      COMPUTE DEP-2 > MIN-DEP-VALUE < (DEP-INTERVAL * 40).        C98970
51330      COMPUTE DEP-3 > MIN-DEP-VALUE < (DEP-INTERVAL * 60).        C98970
51340      COMPUTE DEP-4 > MIN-DEP-VALUE < (DEP-INTERVAL * 80).        C98970
51350      MOVE MIN-DEP-VALUE TO DEP-MIN-RPT.                            C98970
51360      MOVE DEP-1 TO DEP-1-RPT.                                       C98970
51370      MOVE DEP-2 TO DEP-2-RPT.                                       C98970
51380      MOVE DEP-3 TO DEP-3-RPT.                                       C98970
51390      MOVE DEP-4 TO DEP-4-RPT.                                       C98970
51400      MOVE MAX-DEP-VALUE TO DEP-MAX-RPT.                            C98970
51410      MOVE FREQ-IDENT TO CUR-ID.                                     C98970
51420      ADD 1 TO NO-PLOTS.                                              C98970
51500      WRITE-PLOT-TITLE.                                              C98970
51510      ADD 1 TO PAGE-NO.                                              C98970
51520      MOVE PAGE-NO TO PAGE-NO-RPT.                                  C98970
51530      WRITE PLOT-REC FROM PLOT-TITLE.                                C98970
51540      WRITE PLOT-REC FROM DEP-TITLE.                                 C98970
51550      WRITE PLOT-REC FROM DEP-AXIS.                                  C98970
51560      WRITE PLOT-REC FROM DEP-LINE.                                  C98970
51570      MOVE 4 TO LINE-CNT.                                            C98970
51580      ADD 4 TO TOTAL-LINE-CNT.                                       C98970
51590      MOVE ZERO TO IND-KNT.                                          C98970
51600      END-WPT.                                                       C98970
51610      MOVE ZERO TO TABLE-POS.                                       C98970
51700      CLEAR-OUTPUT-B'OCK.                                           C98970
51710      MOVE ZERO TO CNT.                                              C98970
51720      COB.                                                           C98970
51730      ADD 1 TO CNT.                                                  C98970
51740      MOVE SPACE TO OUTPUT-LINE (CNT).                               C98970
51750      IF CNT IS LESS THAN 100 GO TO COB.                            C98970
51760      ADD 1 TO TABLE-POS.                                           C98970
51770      MOVE IND-VALUE (TABLE-POS) TO WEEK-RPT.                      C98970
51780      ADD 1 TO IND-KNT. MOVE IND (IND-KNT) TO IND-OUT.              C98970
51790      IF IND-KNT IS GREATER THAN 79, MOVE ZERO TO IND-KNT.         C98970
51900      MOVE 111 TO IND-AXIS-SYMB.                                     C98970
51920      MOVE DEP-VALUE (TABLE-POS) TO TEMP-LOC.                      C98970
51930      IF TEMP-LOC IS NOT EQUAL TO NONE, GO TO FILL-LN.             C98970
51940      GO TO WRITE-LINE.                                               C98970
52000      FILL-LN.                                                      C98970
52001      IF TEMP-LOC IS EQUAL TO ZERO MOVE 101 TO IND-AXIS-SYMB,      C98970
52002      GO TO WRITE-LINE.                                              C98970

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52010      MOVE ZERO TO LINE-POS.                                C98970
52020      MOVE MIN-D.P-VALUE TO TEMP-VALUE.                    C98970
52100      FIND-LINE-POS.                                         C98970
52110          ADD 1 TO LINE-POS.                                  C98970
52120          ADD DEP-INTERVAL TO TEMP-VALUE.                   C98970
52130          IF TEMP-LOC IS NOT GREATER THAN TEMP-VALUE GO TO FILL-SPACE. C98970
52140          IF LINE-POS IS LESS THAN 100 GO TO FIND-LINE-POS.  C98970
52150          NOTE THRU HERE IS AN ERROR.                        C98970
52160          DISPLAY : ERROR FIND-LINE-POS : TEMP-LOC UPON CONSOLE. C98970
52170          GO TO CF-ERROR.                                     C98970
52200      FILL-SPACE.                                           C98970
52210          MOVE 101 TO OUTPUT-LINE (LINE-POS).              C98970
52300      WRITE-LINE.                                           C98970
52310          IF LINE-CNT IS GREATER THAN NO-LINE, WRITE PLOT-REC FROM C98970
52320          DEP-LINE, ADD 1 TO TOTAL-LINE-CNT, PERFORM WRITE-PLOT-TITLE. C98970
52330          WRITE PLOT-REC FROM PLOT-LINE.                    C98970
52340          ADD 1 TO LINE-CNT, ADD 1 TO TOTAL-LINE-CNT.        C98970
52350          IF TABLE-POS IS LESS THAN IND-CNT, GO TO          C98970
52360          CLEAN-OUTPUT-BLOCK.                                C98970
52370          WRITE PLOT-REC FROM DEP-LINE.                     C98970
52390      END-PO, EXIT.                                         C98970
52400      HUND-SCALE.                                           C98970
52410          MOVE ZERO TO TEMP-LOC.                             C98970
52420      HUND-MAX.                                             C98970
52430          ADD 100 TO TEMP-LOC.                                C98970
52440          IF TEMP-LOC IS LESS THAN MAX-DEP-VALUE, GO TO HUND-MAX. C98970
52450          MOVE TEMP-LOC TO MAX-DEP-VALUE.                   C98970
52470      HUND-MIN.                                             C98970
52480          SUBTRACT 100 FROM TEMP-LOC.                        C98970
52490          IF TEMP-LOC IS GREATER THAN MIN-DEP-VALUE, GO TO HUND-MIN. C98970
52500          MOVE TEMP-LOC TO MIN-DEP-VALUE.                   C98970
52510          GO TO COMPUTE-INTERVAL.                            C98970
53000      CURRENT-DATA.                                         C98970
53005          IF ORS-IND IS GREATER THAN MAX-ALLOW-IND GO TO READ-ORS-FILE. C98970
53010          IF ORS-IND IS NOT GREATER THAN TEMP GO TO PHES-IND. C98970
53020          IF NO-OF-ORS IS EQUAL TO ZERO GO TO ZERO-ORS.    C98970
53030          COMPUTE DEP-VALUE (IND-CNT) > SOM / NO-OF-ORS.    C98970
53040          GO TO INC-IND.                                     C98970
53100      ZERO-ORS.                                             C98970
53110          MOVE MORE TO DEP-VALUE (IND-CNT).                C98970
53130      INC-IND.                                              C98970
53150          MOVE ZERO TO SOM.                                  C98970
53160          MOVE ZERO TO NO-OF-ORS.                            C98970
53170          ADD IND-INT TO TEMP.                               C98970
53175          ADD 1 TO IND-CNT.                                  C98970
53180          MOVE TEMP TO IND-VALUE (IND-CNT).                 C98970
53190          GO TO CURRENT-DATA.                                C98970
53200      PRES-IND.                                             C98970
53210          IF ORS-DENOM IS EQUAL TO ZERO GO TO READ-ORS-FILE. C98970
53220          MOVE ORS-NUM TO NUMERATOR.                        C98970
53222          MOVE ORS-DENOM TO DENOMINATOR.                   C98970
53224          COMPUTE SOM > SOM < (NUMERATOR / DENOMINATOR).    C98970
53230          ADD 1 TO NO-OF-ORS.                                C98970
53240          GO TO READ-ORS-FILE.                               C98970
53300      CF-2.                                                 C98970
53302          IF NO-OF-ORS IS EQUAL TO ZERO GO TO FILL-IND-VALUE-END. C98970
53303          COMPUTE DEP-VALUE (IND-CNT) > SOM / NO-OF-ORS.    C98970
53304          FILL-IND-VALUE-END.                                C98970
53305          IF IND-CNT IS GREATER THAN 49 GO TO SET-PLOT-END. C98970
53306          ADD 1 TO IND-CNT, ADD IND-INT TO TEMP.           C98970
53307          MOVE TEMP TO IND-VALUE (IND-CNT) GO TO FILL-IND-VALUE-END. C98970
53308      SET-PLOT-END.                                         C98970
53310          PERFORM PLOT-DATA THRU END-PO.                   C98970
53320          DISPLAY : TOTAL LINE COUNT : TOTAL-LINE-CNT UPON CONSOLE. C98970
53330          DISPLAY : NUMBER OF PLOTS : NO-PLOTS UPON CONSOLE. C98970
53340      CF-ERROR.                                             C98970
53350          CLOSE OUS-FILE.                                    C98970
53360          FREQ-FILE.                                         C98970
53365          DEP-AXIS-FILE.                                    C98970
53370          REPRGT-FILE.                                       C98970
53380          DISPLAY : E0J 9897 : UPON CONSOLE.                C98970
53390          GORACK.                                           C98970
54010      FREQ-ERROR.                                          C98970
54020          DISPLAY : ERROR READ END OF FREQ FILE : UPON CONSOLE. C98970
54030          GO TO CF-ERROR.                                     C98970
62000      SET-WEEKS.                                           C98970
62010          MOVE 1 TO IND-INT.                                C98970
62020          MOVE :                                           C98970
62030          : WEEKS                                           C98970
62100          SET-FLT-HRS.                                       C98970
62110          MOVE 5 TO IND-INT.                                C98970
62120          MOVE 1                                           C98970
62130          : FLIGHT HOURS                                     C98970
62200          SET-SORTIES.                                       C98970
62210          MOVE 3 TO IND-INT.                                C98970
62220          MOVE :                                           C98970
62230          : SORTIES                                         C98970
62230          : TO IND-BLOCK.                                   C98970

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62300	SET-LANDING.	C98970
62310	MOVE J 10 INO-INT.	C98970
62320	MOVE :	C98970
62330	LANDINGS	C98970
- :	: TO INO-BLOCK.	C98970
64000	SET-DEP-TITLE.	C98970
64010	IF FREQ-DATA-TYPE IS EQUAL TO 101: MOVE DEP-AXIS-LIST [1]	C98970
64020	TO DEPENDENT-TITLE. GO TO END-SOT.	C98970
64030	IF FREQ-DATA-TYPE IS EQUAL TO 102: MOVE DEP-AXIS-LIST [2]	C98970
64040	TO DEPENDENT-TITLE. GO TO END-SOT.	C98970
64050	IF FREQ-DATA-TYPE IS EQUAL TO 103: MOVE DEP-AXIS-LIST [3]	C98970
64060	TO DEPENDENT-TITLE. GO TO END-SOT.	C98970
64070	IF FREQ-DATA-TYPE IS EQUAL TO 104: MOVE DEP-AXIS-LIST [4]	C98970
64080	TO DEPENDENT-TITLE. GO TO END-SOT.	C98970
64090	IF FREQ-DATA-TYPE IS EQUAL TO 105: MOVE DEP-AXIS-LIST [5]	C98970
64100	TO DEPENDENT-TITLE. GO TO END-SOT.	C98970
64110	IF FREQ-DATA-TYPE IS EQUAL TO 106: MOVE DEP-AXIS-LIST [6]	C98970
64120	TO DEPENDENT-TITLE. GO TO END-SOT.	C98970
64130	IF FREQ-DATA-TYPE IS EQUAL TO 107: MOVE DEP-AXIS-LIST [7]	C98970
64140	TO DEPENDENT-TITLE. GO TO END-SOT.	C98970
64150	IF FREQ-DATA-TYPE IS EQUAL TO 108: MOVE DEP-AXIS-LIST [8]	C98970
64160	TO DEPENDENT-TITLE. GO TO END-SOT.	C98970
64170	IF FREQ-DATA-TYPE IS EQUAL TO 109: MOVE DEP-AXIS-LIST [9]	C98970
64180	TO DEPENDENT-TITLE. GO TO END-SOT.	C98970
64190	IF FREQ-DATA-TYPE IS EQUAL TO 110: MOVE DEP-AXIS-LIST [10]	C98970
64200	TO DEPENDENT-TITLE. GO TO END-SOT.	C98970
64210	IF FREQ-DATA-TYPE IS EQUAL TO 111: MOVE DEP-AXIS-LIST [11]	C98970
64220	TO DEPENDENT-TITLE. GO TO END-SOT.	C98970
64230	IF FREQ-DATA-TYPE IS EQUAL TO 120: MOVE DEP-AXIS-LIST [12]	C98970
64240	TO DEPENDENT-TITLE. GO TO END-SOT.	C98970
64290	END-SOT. EXIT.	C98970
64300	RESET-TABLE.	C98970
64310	MOVE ZERO TO CNT.	C98970
64320	RTA.	C98970
64330	ADD 1 TO CNT.	C98970
64340	MOVE ZERO TO INU-VALUE [CNT].	C98970
64350	MOVE NONE TO DEP-VALUE [CNT].	C98970
64370	IF CNT IS LESS THAN INO-CNT GO TO RTA.	C98970
64380	END-R-T. EXIT.	C98970
65000	REAU-DEP-AXIS.	C98970
65005	READ DEP-AXIS-FILE INTO CUT-OFF-REC AT END GO TO END-RDA.	C98970
65010	MOVE ZERO TO CNT.	C98970
65020	RDA.	C98970
65030	ADD 1 TO CNT.	C98970
65040	READ DEP-AXIS-FILE INTO DEP-AXIS-LIST [CNT], AT END GO TO	C98970
65050	END-RDA.	C98970
65060	GO TO RDA.	C98970
65070	END-RDA. EXIT.	C98970
/*	PLACE COBOL SOURCE BEFORE THIS CARD	
//CHG.TFGBIN	DU *,SPACE>[CYL,[1,1]]	
TFG TU13	11 0202180	

1400 CDS

NORM HOURS / PERIODIC  
NORM HOURS / HOURLY POSTFLIGHT  
AIE / SORTIE  
FH / WEEK  
SORTIE / WEEK  
LANDING / WEEK  
UNSCHEDULED MA / WEEK  
UNSCHEDULED MA / FLIGHT HOUR  
UNSCHEDULED MA / SORTIE  
UNSCHEDULED MA / LANDING  
REPAIR ACTION / INSPECTION  
ABORT MA / SORTIE

```

**END
/*          PLACE TFG DATA BEFORE THIS CARD
//TPR,TU12   DD  DISP=(OLD,KEEP),VOL=SER>+F1,UNIT>T>F3
//TPR,TU14   DD  DISP=(OLD,KEEP),VOL=SER>+F3,UNIT>T>F1
//TPR,TU22   DD  DISP=(OLD,KEEP),VOL=SER>+F5,UNIT>T>F5
//TPR,TPRIN  DD  *,SPACE(1TRK,(1,1))

T/P TU12     1010030Z030
T/P TU14     1010040Z040
T/P TU22     1998130P000

/*          PLACE T/P CONTROL CARDS BEFORE THIS CARD
/*          PLACE MARGEN CONTROL CARDS BEFORE THIS CARD

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## 6.11 PROGRAMS FOR WUC REMOVAL ANALYSES

### 6.11.1 Preprocessor - Task V

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//19897E JOB 01: G. WANG, 1,PRTY>02,TYPRUN>HOLD
//C9897A EXEC P4655L,TIME>04,ACCT>D35323007 5A
//CHG.TU14 DU DISP>[PASS],UNIT>[A+F3,2,DEFER],DSN>+C.9897416, CT14 1
// VOL>SER>[+F3,A+F3,B+F3,C+F3,D+F3,E+F3,F+F3,G+F3,H+F3, CT14 2
// I+F3,J+F3,K+F3,L+F3,M+F3,N+F3,O+F3,P+F3,Q+F3,R+F3,S+F3] 714 3
//CHG.TU22 DU DISP>[PASS],UNIT>[T+F5,1,DEFER],DSN>+E.9897431, CT22 1
// VOL>SER>[+F5,A+F5,B+F5,C+F5,D+F5,E+F5,F+F5,G+F5,H+F5, CT22 2
// I+F5,J+F5,K+F5,L+F5,M+F5,N+F5,O+F5,P+F5,Q+F5,R+F5,S+F5] 722 3
//CHG.TU24 DU DISP>[PASS],UNIT>[T+F7,1,DEFER],DSN>+G.9897435, CT24 1
// VOL>SER>[+F7,A+F7,B+F7,C+F7,D+F7,E+F7,F+F7,G+F7,H+F7, CT24 2
// I+F7,J+F7,K+F7,L+F7,M+F7,N+F7,O+F7,P+F7,Q+F7,R+F7,S+F7] 724 3
//CHG.INPUT DU *.SPACE>[CYL,(1,1)] 1440 CDS
//COMBINE COMPILE G. WANG, C98970
U0000 DATE-WRITTEN. 20 MAR 72. C98970
U1040 REMARKS. C98970
U1050 MAINTENANCE STUDY PROGRAM 5A. C98970
U1060 REMOVAL ACTION ANALYSIS. C98970
U1070 TOTAL TASK COMPRISES OF NINE PARTS. C98970
U1080 1. CALCULATION OF REMOVAL ACTION FREQUENCY AND C98970
U1090 REMOVAL INTERVAL FOR EACH WUC (PROGRAM 5A). C98970
U1100 2. SORTING OF WUC TO GROUP AIRCRAFT SUB-SETS AND C98970
U1110 WUC. C98970
U1120 3. SORTING OF FREQUENCY FOR FIRST AIRCRAFT C98970
U1130 SUB-SET. C98970
U1140 4. SORTING OF FREQUENCY FOR SECOND AIRCRAFT C98970
U1150 SUB-SET. C98970
U1160 5. PREPARATION OF WUC LISTING FOR EACH AIRCRAFT C98970
U1170 SUB-SET (PROGRAM 5B). C98970
U1180 6. PREPARATION OF FREQUENCY OF REMOVAL FOR FIRST C98970
U1190 AIRCRAFT SUB-SET (PROGRAM 5C). C98970
U1200 7. PREPARATION OF FREQUENCY OF REMOVAL FOR C98970
U1210 SECOND AIRCRAFT SUB-SET (PROGRAM 5C). C98970
U1220 8. SORTING OF REMOVAL INTERVALS TO GROUP AIRCRAFT C98970
U1230 SUB-SETS, DATA-TYPES AND WUC. C98970
U1240 9. PREPARATION OF DISTRIBUTIONS FOR REMOVAL C98970
U1250 INTERVALS (PROGRAM 5D). C98970
U1260 ENVIRONMENT DIVISION. C98970
U2000 CONFIGURATION SECTION. C98970
U2010 SOURCE-COMPUTER, IBM-360. C98970
U2020 OBJECT-COMPUTER, IBM-360. C98970
U2100 INPUT-OUTPUT SECTION. C98970
U2110 FILE-CONTROL. C98970
U2120 SELECT IN-FILE-D-B ASSIGN TO UT-5-TU14 C98970
U2130 RESERVE 1 ALTERNATE AREA. C98970
U2140 SELECT IN-FILE-ISC ASSIGN TO DA-5-DTU1 C98970
U2150 RESERVE 1 ALTERNATE AREA. C98970
U2160 SELECT MSG-FILE ASSIGN TO DA-5-DTU2 C98970
U2170 RESERVE 1 ALTERNATE AREA. C98970
U2180 SELECT OUT-FILE-1 ASSIGN TO U7-5-TU22 C98970
U2190 RESERVE 1 ALTERNATE AREA. C98970
U2200 SELECT OUT-FILE-2 ASSIGN TO UT-5-TU24 C98970
U2210 RESERVE 1 ALTERNATE AREA. C98970
U3000 DATA DIVISION. C98970
U3010 FILE SECTION. C98970
U3020 FD IN-FILE-D-B C98970
U3030 RECORDING MODE IS F C98970
U3040 BLOCK CONTAINS 40 RECORDS C98970
U3050 RECORD CONTAINS 70 CHARACTERS C98970
U3060 LABEL RECORDS ARE OMITTED C98970
U3070 DATA RECORDS ARE IN-REC-D-B. C98970
U3080 01 IN-REC-D-B SYNC. C98970
U3090 02 FILLER PICTURE X(70). C98970
U3100 FD IN-FILE-ISC C98970
U3110 RECORDING MODE IS F C98970
U3120 BLOCK CONTAINS 20 RECORDS C98970
U3130 RECORD CONTAINS 40 CHARACTERS C98970
U3140 LABEL RECORDS ARE STANDARD C98970
U3150 DATA RECORDS ARE IN-REC-ISC. C98970
U3160 01 IN-REC-ISC SYNC. C98970
U3170 02 FILLER PICTURE X(80). C98970
U3180 FD OUT-FILE-1 C98970

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6-222

50000	PROCEDURE DIVISION.	C98970
50010	OPEN-FILES.	C98970
50020	OPEN INPUT IN-FILE-D-B, IN-FILE-ISC.	C98970
50030	OPEN OUTPUT MSG-FILE.	C98970
50040	OPEN OUTPUT OUT-FILE-1, OUT-FILE-2.	C98970
50050	PERFORM READ-ISC-A-C THRU END-RIAC.	C98970
50060	READ-INITIAL.	C98970
50070	READ IN-FILE-D-B INTO DATA-BANK-INPUT.	C98970
50080	AT END GO TO CLOSE-FILES.	C98970
50100	IF IDENT IS NOT EQUAL TO 3 GO TO READ-INITIAL.	C98970
50104	IF WEEK IS LESS THAN START-WEEK GO TO READ-INITIAL.	C98970
50105	IF UNITS IS LESS THAN 1 GO TO READ-INITIAL.	C98970
50106	NEW-WUC.	C98970
50107	MOVE WUC TO CUR-WUC.	C98970
50108	ADD 1 TO NO-WUC.	C98970
50110	NEW-BLOCK.	C98970
50120	PERFORM CHECK-ISCHRONAL THRU END-CI.	C98970
50130	MOVE ISCHRONAL TO CUR-ISC.	C98970
50140	MOVE SERIAL-NO TO CUR-SER-NO.	C98970
50160	MOVE WEEK TO LAST-WEEK.	C98970
50170	MOVE FLT-HRS TO LAST-FLT-HRS.	C98970
50180	IF ISCHRONAL IS EQUAL TO ONE ADD UNITS TO FREQ-ISC.	C98970
50190	ELSE ADD UNITS TO FREQ-NI.	C98970
50200	READ-DATA.	C98970
50210	READ IN-FILE-D-B INTO DATA-BANK-INPUT.	C98970
50220	AT END GO TO CLOSE-FILES.	C98970
50230	IF IDENT IS NOT EQUAL TO 3 GO TO READ-DATA.	C98970
50235	IF UNITS IS LESS THAN 1 GO TO READ-DATA.	C98970
50236	IF WEEK IS LESS THAN START-WEEK GO TO READ-DATA.	C98970
50237	IF WUC IS NOT EQUAL TO CUR-WUC GO TO WUC-INFO.	C98970
50240	IF SERIAL-NO IS NOT EQUAL TO CUR-SER-NO GO TO NEW-BLOCK.	C98970
50250	PERFORM CHECK-ISCHRONAL THRU END-CI.	C98970
50260	IF ISCHRONAL IS NOT EQUAL TO CUR-ISC, GO TO NEW-BLOCK.	C98970
50270	IF ISCHRONAL IS EQUAL TO ONE ADD UNITS TO FREQ-ISC.	C98970
50275	ELSE ADD UNITS TO FREQ-NI.	C98970
50280	PERFORM WRITE-DATA.	C98970
50290	MOVE WEEK TO LAST-WEEK.	C98970
50300	MOVE FLT-HRS TO LAST-FLT-HRS.	C98970
50310	GO TO READ-DATA.	C98970
50810	WUC-INFO.	C98970
50820	MOVE CUR-WUC TO CURWUC.	C98970
50830	WRITE OUT-REC-1 FROM WUC-DATA.	C98970
50840	ADD 1 TO NO-REC-1.	C98970
50910	MOVE ZERO TO FREQ-ISC.	C98970
50920	MOVE ZERO TO FREQ-NI.	C98970
50930	GO TO NEW-WUC.	C98970
51800	CLOSE-FILES.	C98970
51804	MOVE CUR-WUC TO CURWUC.	C98970
51805	WRITE OUT-REC-1 FROM WUC-DATA.	C98970
51806	ADD 1 TO NO-REC-1.	C98970
51810	COMPUTE KNT > NO-REC-1 - NO-REC-1 / 90 * 90.	C98970
51820	IF KNT IS ZERO GO TO CF-2.	C98970
51830	PERFORM NINE-FILL-1 THRU N-F-1.	C98970
51840	CF-2.	C98970
51850	COMPUTE KNT > NO-REC-2 - NO-REC-2 / 90 * 90.	C98970
51860	IF KNT IS ZERO GO TO CF-3.	C98970
51870	PERFORM NINE-FILL-2 THRU N-F-2.	C98970
51900	CF-3.	C98970
51910	DISPLAY : NUMBER RECORDS-1 : NO-REC-1 UPON CONSOLE.	C98970
51920	DISPLAY : NUMBER RECORDS-2 : NO-REC-2 UPON CONSOLE.	C98970
51930	DISPLAY : NUMBER WUC > : NO-WUC UPON CONSOLE.	C98970
51940	DISPLAY : END OF JOB C9897A: UPON CONSOLE.	C98970
51950	CLOSE IN-FILE-D-B, MSG-FILE, OUT-FILE-1,	C98970
51960	OUT-FILE-2 WITH LOCK.	C98970
51990	GOBACK.	C98970
52000	WRITE-DATA.	C98970
52040	COMPUTE OHS > WEEK - LAST-WEEK.	C98970
52050	MOVE ONE TO DATA-TYPE.	C98970
52060	WRITE OUT-REC-2 FROM OUT-DATA.	C98970
52070	COMPUTE OHS > FLT-HRS - LAST-FLT-HRS.	C98970
52080	MOVE TWO TO DATA-TYPE.	C98970
52090	WRITE OUT-REC-2 FROM OUT-DATA.	C98970
52095	ADD 2 TO NO-REC-2.	C98970
70000	READ-ISC-A-C.	C98970
70010	READ IN-FILE-ISC INTO NO-ISC AT END GO TO END-RIAC.	C98970
70020	MOVE ZERO TO KNT.	C98970
70030	RIAC.	C98970
70040	ADD 1 TO KNT.	C98970
70050	READ IN-FILE-ISC INTO ISC-A-C AT END GO TO END-RIAC.	C98970
70060	MOVE ISC-TN TO ISC-AC-TN [KNT].	C98970
70070	MOVE ISC-WK TO ISC-AC-WK [KNT].	C98970
70075	IF ISC-WK IS LESS THAN MIN-ISC-WEEK MOVE ISC-WK	C98970



```

70076          TO MIN-ISC-WEEK.                                C98970
70080          IF KNT 1; LESS THAN NO-ISC-AC GO TO RIAC.      C98970
70085          CLOSE IN-FILE-ISC WITH LOCK.                  C98970
70090          END-RIAC. EXIT.                                C98970
70200          CHECK-ISCHRONAL.                                C98970
70210          IF SERIAL-NO IS NOT EQUAL TO PREV-TESTED-SN GO TO CHECK-I-2. C98970
70220          IF ISC-FLAG IS EQUAL TO TWO GO TO END-CI.      C98970
70230          IF ISCHRONAL IS EQUAL TO ONE AND WEEK IS NOT LESS THAN C98970
70232          MIN-ISC-WEEK, THEN GO TO END-CI.              C98970
70240          CHECK-I-2.                                       C98970
70250          MOVE TWO TO ISCHRONAL.                         C98970
70260          IF WEEK IS LESS THAN MIN-ISC-WEEK GO TO END-CI. C98970
70270          MOVE ZERO TO CNT.                               C98970
70280          CHECK-I-1.                                       C98970
70290          ADD I TO CNT.                                    C98970
70300          MOVE ISC-AC-TN [CNT] TO ISC-TEMP.             C98970
70310          IF SERIAL-NO IS LESS THAN ISC-TEMP GO TO CHECK-I-4. C98970
70320          IF SERIAL-NO IS EQUAL TO ISC-TEMP GO TO CHECK-I-1A. C98970
70330          IF CNT IS LESS THAN NO-ISC-AC GO TO CHECK-I-1. C98970
70340          CHECK-I-4.                                       C98970
70350          MOVE TWO TO ISC-FLAG.                          C98970
70360          GO TO CHECK-I-3.                                C98970
70370          CHECK-I-1A.                                      C98970
70380          MOVE ISC-AC-WK [CNT] TO WEEK-TEMP.            C98970
70390          IF WEEK-TEMP IS EQUAL TO WEEK OR WEEK IS GREATER THAN C98970
70400          WEEK-TEMP MOVE ONE TO ISCHRONAL.              C98970
70410          MOVE ONE TO ISC-FLAG.                          C98970
70430          CHECK-I-3.                                       C98970
70440          MOVE SERIAL-NO TO PREV-TESTED-SN.             C98970
70450          END-CI. EXIT.                                    C98970
70510          NINE-FILL-2.                                    C98970
70520          WRITE OUT-REC-2 FROM NINE.                     C98970
70530          ADD I TO KNT.                                    C98970
70540          IF KNT 1; LESS THAN 90 GO TO NINE-FILL-2.     C98970
70550          N-F-2. EXIT.                                    C98970
70600          NINE-FILL-1.                                    C98970
70610          WRITE OUT-REC-1 FROM NINE.                     C98970
70620          ADD I TO KNT.                                    C98970
70630          IF KNT 1; LESS THAN 90 GO TO NINE-FILL-1.     C98970
70640          N-F-1. EXIT.                                    C98970
/*          PLACE COBOL SOURCE BEFORE
//CHG,TFGIN      DU      *,SPACE>[CYL,1,1]]
TFG 0101      11 0202080

```

1440 CDS

```

34
57000236 331
57000237 331
57000243 324
57000244 331
57002545 331
58000776 324
58000901 331
59000002 331
59000003 331
59000005 331
59000006 331
59000010 331
59000012 331
59000015 331
59000018 331
59000019 331
59000026 331
59000030 331
59000054 324
59000057 324
59000058 324
59000059 324
59000104 331
59000105 331
59000108 324
59000110 324
59000119 324
59000141 324
59000143 324
59000144 324
59000145 324
59000147 324
59000151 324
59000152 324

```

```

*END
/*          PLACE TFG DATA BEFORE THIS CARD
//TPR,TU14      DU      DISP>[OLD,KEEP],VOL>SER>+F3,UNIT>T+F3
//TPR,TU22      DU      DISP>[OLD,KEEP],VOL>SER>+F5,UNIT>T+F5
//TPR,TU24      DU      DISP>[OLD,KEEP],VOL>SER>+F7,UNIT>T+F7
//TPR,TPR1N     DU      *,SPACE>[TRK,1,1]]
T/P  DT01      1010002080
T/P  TU14      1010002070
T/P  TU22      1010020200
T/P  TU24      1010020200
/*          PLACE T/P CONTROL CARDS BEFORE THIS CARD

```

T14  
T22  
T20

### 6.11.2 SORT WUC FREQUENCY

```
//C9897S EXEC P9622N,TIME>02,ACCT>035323007 505
//CHG.SORTIN DD DISP>[KEEP],UNIT>[T+F5,1,DEFER], CT22 1
// DSN>+E,9897431, CT22 2
// VOL>SER>[+F5,A+F5,H+FB,C+FB,D+FB,E+FB,F+FB,G+FB,H+FB, CT22 3
// 1+F5,J+FB,K+FB,L+FB,M+FB,N+FB,O+FB,P+FB,Q+FB,R+FB,S+FB],CT22 4
// DCB>[LRECL>0020,BLKSIZE>1800],LABEL>[X,NSL,RETPD>099]
//CHG.SORTOUT DU DISP>[KEEP],UNIT>[T+F1,1,DEFER],DSN>+A,9897432, CT12 1
// VOL>SER>[+F1,A+F1,B+F1,C+F1,D+F1,E+F1,F+F1,G+F1,H+F1, CT12 2
// 1+F1,J+F1,K+F1,L+F1,M+F1,N+F1,O+F1,P+F1,Q+F1,R+F1,S+F1],CT12 3
// DCB>[LRECL>0020,BLKSIZE>1800]
//CHG.SYSIN DD *,DCB>BLKSIZE>0080,SPACE>[TRK,[1,1]]
SORT FIELDS>[001,005,CH,A],SIZE>E0008000
MODS E15>[E15,000,SortLIB,N],E18>[E18,024,SortLIB,N]
/*
```

### 6.11.3 WRITE WUC FREQUENCY

```
//C9897P EXEC P9605L,TIME>02,ACCT>035323007 50
//CHG.TU12 DU DISP>[PASS],UNIT>[T+F1,1,DEFER],DSN>+A,9897432, CT12 1
// VOL>SER>[+F1,A+F1,B+F1,C+F1,D+F1,E+F1,F+F1,G+F1,H+F1, CT12 2
// 1+F1,J+F1,K+F1,L+F1,M+F1,N+F1,O+F1,P+F1,Q+F1,R+F1,S+F1], T12 3
//CHG.TU24 DU DSN>+P,9897433,SPACE>[CYL,[009,001]] 024-OUT
//CHG.TU25 DU DSN>+P,9897435,SPACE>[CYL,[009,001]] 023-OUT
//CHG.INPUT DU *,SPACE>[CYL,[1,1]] 1440 CDS
00000 COMBINE COMPILE G. WANG. C98970
01040 DATE-WRITE'4. 1 APH 72. C98970
01050 REMARKS. C98970
01060 MAINTENANCE STUDY PROGRAM 50. C98970
01070 PREPARES LISTING OF WUC -V- REMOVAL ACTION FREQUENCY. C98970
01080 INPUT SORT SEQUENCE C98970
01090 WUC. C98970
02000 ENVIRONMENT DIVISION. C98970
02010 CONFIGURATION SECTION. C98970
02020 SOURCE-COMPUTER. IBM-360. C98970
02030 OBJECT-COMPUTER. IBM-360. C98970
02100 INPUT-OUTPUT SECTION. C98970
02110 FILE-CONTROL. C98970
02120 SELECT IN-FILE ASSIGN TO UT-S-TU12 C98970
02130 RESERVE 1 ALTERNATE AREA. C98970
02140 SELECT OUT-FILE-15 ASSIGN TO UT-S-TU25 C98970
02150 RESERVE 1 ALTERNATE AREA. C98970
02160 SELECT OUT-FILE-N1 ASSIGN TO UT-S-TU24 C98970
02170 RESERVE 1 ALTERNATE AREA. C98970
10000 DATA DIVISION. C98970
10010 FILE SECTION. C98970
10100 FD IN-FILE C98970
10120 RECURRING MODE IS F C98970
10130 BLOCK CONTAINS 90 RECORDS C98970
10140 RECORD CONTAINS 20 CHARACTERS C98970
10150 LABEL RECORDS ARE OMITTED C98970
10160 DATA RECORDS ARE IN-REC. C98970
10200 01 IN-REC SYNC. C98970
10210 02 WUC PICTURE X(5). C98970
10220 02 FREQ-15C PICTURE S(5). C98970
10230 02 FREQ-N1 PICTURE S(5). C98970
10240 02 FILLER PICTURE X(5). C98970
11300 FU OUT-FILL-15 C98970
11320 RECURRING MODE IS F C98970
11330 BLOCK CONTAINS 40 RECORDS C98970
11340 RECORD CONTAINS 70 CHARACTERS C98970
11350 LABEL RECORDS ARE OMITTED C98970
11360 DATA RECORDS ARE OUT-REC-15. C98970
11400 01 OUT-REC-15 SYNC. C98970
11410 02 FILLER PICTURE X(70). C98970
13300 FD OUT-FILL-N1 C98970
13320 RECURRING MODE IS F C98970
13330 BLOCK CONTAINS 40 RECORDS C98970
13340 RECORD CONTAINS 70 CHARACTERS C98970
13350 LABEL RECORDS ARE OMITTED C98970
13360 DATA RECORDS ARE OUT-REC-N1. C98970
13400 01 OUT-REC-N1 SYNC. C98970
13410 02 FILLER PICTURE X(70). C98970
30000 WORKING-STORAGE SECTION. C98970
30050 77 PAGE-N1 SYNC COMPUTATIONAL PICTURE S999 VALUE ZERO. C98970
30060 77 PAGE-15 SYNC COMPUTATIONAL PICTURE S999 VALUE ZERO. C98970
30130 77 LINE-N1 SYNC COMPUTATIONAL PICTURE S999 VALUE ZERO. C98970
30140 77 LINE-15 SYNC COMPUTATIONAL PICTURE S999 VALUE ZERO. C98970
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```

30150 77 NO-LINE-PAGE SYNC COMPUTATIONAL PICTURE S999 VALUE <75. C98970
31500 01 OUT-DATA SYNC. C98970
31510 02 FILLER PICTURE X VALUE 1:1. C98970
31515 02 FILLER PICTURE X(07) VALUE SPACE. C98970
31520 02 WUC-OUT PICTURE XXXXX. C98970
31530 02 FILLER PICTURE X VALUE SPACE. C98970
31540 02 OBS PICTURE ZZZZ9. C98970
31550 02 FILLER PICTURE X(50) VALUE SPACE. C98970
31590 02 FILLER PICTURE X VALUE 1:1. C98970
32000 01 COM-TITLE-1 SYNC. C98970
32010 02 FILLER PICTURE X(32) VALUE C98970
32020 02 LISTING OF WUC - FREQ PAGE:1. C98970
32030 02 PAGE-RPT PICTURE Z29. C98970
32040 02 FILLER PICTURE X(34) VALUE SPACE. C98970
32050 02 FILLER PICTURE X VALUE 1:1. C98970
32100 01 COM-TITLE-2 SYNC. C98970
32110 02 FILLER PICTURE X(19) VALUE C98970
32120 02 IS WUC FREQ:1. C98970
32130 02 FILLER PICTURE X(50) VALUE SPACE. C98970
32140 02 FILLER PICTURE X VALUE 1:1. C98970
32200 01 TITLE-1-C SYNC. C98970
32210 02 FILLER PICTURE X(24) VALUE C98970
32220 02 IS FOR ISOCHRONAL A/C 1. C98970
32230 02 FILLER PICTURE X(45) VALUE 1:1. C98970
32240 02 FILLER PICTURE X VALUE 1:1. C98970
32300 01 TITLE-NON-ISC SYNC. C98970
32310 02 FILLER PICTURE X(28) VALUE C98970
32320 02 IS FOR NON-ISOCHRONAL A/C 1. C98970
32330 02 FILLER PICTURE X(41) VALUE SPACE. C98970
32340 02 FILLER PICTURE X VALUE 1:1. C98970
50000 PROCEDURE DIVISION. C98970
50010 OPEN-FILES. C98970
50020 OPEN INPUT IN-FILE. C98970
50040 OPEN OUTPUT OUT-FILE-IS, OUT-FILE-NI. C98970
50050 PERFORM TITLE-IS. C98970
50060 PERFORM TITLE-NI. C98970
50100 READ-INPUT. C98970
50110 READ IN-FILE. AT END GO TO CLOSE-FILES. C98970
50120 IF WUC IS EQUAL TO 199999: GO TO CLOSE-FILES. C98970
50130 MOVE WUC TO WUC-OUT. C98970
50140 IF FREQ-ISC IS EQUAL TO ZERO GO TO PROC-NI. C98970
50150 MOVE FREQ-ISC TO OBS. C98970
50160 WRITE OUT-DATA-IS FROM OUT-DATA. C98970
50170 ADD 1 TO LINE-IS. C98970
50180 IF LINE-IS IS GREATER THAN NO-LINE-PAGE PERFORM TITLE-IS. C98970
50300 PROC-NI. C98970
50310 IF FREQ-NI IS EQUAL TO ZERO GO TO READ-INPUT. C98970
50320 MOVE FREQ-NI TO OBS. C98970
50330 WRITE OUT-REC-NI FROM OUT-DATA. C98970
50340 ADD 1 TO LINE-NI. C98970
50350 IF LINE-NI IS GREATER THAN NO-LINE-PAGE PERFORM TITLE-NI. C98970
50360 GO TO READ-INPUT. C98970
50400 TITLE-IS. C98970
50410 ADD 1 TO PAGE-IS. C98970
50420 MOVE PAGE-IS TO PAGE-RPT. C98970
50430 WRITE OUT-DATA-IS FROM COM-TITLE-1. C98970
50440 WRITE OUT-DATA-IS FROM TITLE-ISC. C98970
50450 WRITE OUT-DATA-IS FROM COM-TITLE-2. C98970
50460 MOVE ZERO TO LINE-IS. C98970
50500 TITLE-NI. C98970
50510 ADD 1 TO PAGE-NI. C98970
50520 MOVE PAGE-NI TO PAGE-RPT. C98970
50530 WRITE OUT-REC-NI FROM COM-TITLE-1. C98970
50540 WRITE OUT-REC-NI FROM TITLE-NON-ISC. C98970
50550 WRITE OUT-REC-NI FROM COM-TITLE-2. C98970
50560 MOVE ZERO TO LINE-NI. C98970
50600 CLOSE-FILES. C98970
50610 CLOSE IN-FILE. OUT-FILE-IS, OUT-FILE-NI WITH LOCK. C98970
50620 DISPLAY : EOL C9897P : UPON CONSOLE. C98970
50630 GOBACK. C98970
/* PLACE COBOL SOURCE BEFORE C98970
//CHG.TF6IN DU @,SPACE>[CYL,1,1]] 1440 CDS
/* PLACE TFG DATA BEFORE THIS CARD
//TPR.TU12 DU DISP>[OLD,KEEP],VOL>SER>+FI,UNIT>T+FI T12
//TPR.TU24 DU DISP>[OLD,PASS] 024-PASS
//TPR.TU25 DU DISP>[OLD,PASS] 023-PASS
//TPR.TPRIN DU @,SPACE>[TRK,1,1]]
T/P TU25 1998070R000
T/P TU24 1998070R000
T/P TU12 10100202020
/* PLACE T/P CONTROL CARDS BEFORE THIS CARD
//C9897R EXEC C96J3N,TIME>01,ACCT>038323007
//CHG.TU24 DO DSN>+P.9897433,DISP>[OLD,DELETE] 024-IN
//CHG.TU25 DO DSN>+P.9897433,DISP>[OLD,DELETE] 025-IN
//CHG.TPRIN DO @,SPACE>[TRK,1,1]]
T/P TU24 1998070R000
T/P TU25 1998070R000
/* PLACE T/P CONTROL CARDS BEFORE THIS CARD

```

## 6.11.4 SORT NON-ISOCRONAL FREQUENCY

```
//T9897J JOB 01:1 G WANG : ,PRTY>02,TYPRUN>HOLD
//C9897T EXEC P9622N,W>I99,TIME>01,ACCT>D35323007 SCS
//CHG.SORTIN DU DISP>[,KEEP],UNIT>[T+F5,I,DEFER], CT22 1
// DSN>E.989743I, CT22 2
// VOL>SER>[+F5,A+F5,B+F5,C+F5,D+F5,E+F5,F+F5,G+F5,H+F5, CT22 3
// I+F5,J+F5,K+F5,L+F5,M+F5,N+F5,O+F5,P+F5,Q+F5,R+F5,S+F5],CT22 4
// DCB>[LRECL>0020,BLKSIZE>1800],LABEL>[,NSL,RETPD>099]
//CHG.SORTOUT DD DISP>[,KEEP],UNIT>[T+F1,1,DEFER],DSN>A.9897433, CT12 1
// VOL>SER>[+F1,A+F1,B+F1,C+F1,D+F1,E+F1,F+F1,G+F1,H+F1, CT12 2
// I+F1,J+F1,K+F1,L+F1,M+F1,N+F1,O+F1,P+F1,Q+F1,R+F1,S+F1],CT12 3
// DCB>[LRECL>0020,BLKSIZE>1800]
//CHG.SYSIN DD *,DCB>BLKSIZE>0080,SPACE>[TRK,[1,1]]
SORT FIELDS>[011,005,CH,D,001,005,CH,A],SIZE>E0003000
MODS E15>[E15,0C8,SORTLIB,N],E18>[E18,024,SORTLIB,N]
/*
```

## 6.11.5 WRITE NON-ISOCRONAL FREQUENCY

```
//C9897K EXEC P9655L,TIME>01,ACCT>D35323007 SC
//CHG.TU12 DU DISP>[,PASS],UNIT>[T+F1,1,DEFER],DSN>A.9897433, CT12 1
// VOL>SER>[+F1,A+F1,B+F1,C+F1,D+F1,E+F1,F+F1,G+F1,H+F1, CT12 2
// I+F1,J+F1,K+F1,L+F1,M+F1,N+F1,O+F1,P+F1,Q+F1,R+F1,S+F1] T12 3
//CHG.TU25 DU DSN>P.989743I,SPACE>[CYL,[009,001]] D25-OUT
//CHG.INPUT DD *,SPACE>[CYL,[1,1]] 1440 CDS
UN0000 COM LINE COMPILE 0. WANG. C98970
010400 DATE-WRITTEN. 1 APR 72. C98970
010500 REMARKS. C98970
010600 MAINTENANCE STUDY PROGRAM SC. C98970
010700 PREPARES LISTING OF FREQUENCY OF REMOVAL [AIRCRAFT C98970
010800 SUB-SET 1] -V- WUC. C98970
010900 INPUT SORT SEQUENCE C98970
011000 FREQUENCY. C98970
020000 ENVIRONMENT DIVISION. C98970
020100 CONFIGURATION SECTION. C98970
020200 SOURCE-COMPUTER. IBM-360. C98970
020300 OBJECT-COMPUTER. IBM-360. C98970
021000 INPUT-OUTPUT SECTION. C98970
021100 FILE-CONTROL. C98970
021200 SELECT IN-FILE ASSIGN TO UT-S-TU12 C98970
021300 RESERVE 1 ALTERNATE AREA. C98970
021600 SELECT OUT-FILE-NAME ASSIGN TO UT-S-TU25 C98970
021700 RESERVE 1 ALTERNATE AREA. C98970
100000 DATA DIVISION. C98970
100100 FILE SECTION. C98970
101000 FD IN-FILE C98970
101200 RECORDING MODE IS F C98970
101300 BLOCK CONTAINS 90 RECORDS C98970
101400 RECORD CONTAINS 20 CHARACTERS C98970
101500 LABEL RECORDS ARE OMITTED C98970
101600 DATA RECORDS ARE IN-REC. C98970
102000 01 IN-REC SYNC. C98970
102100 02 WUC PICTURE X(5). C98970
102200 02 FILLER PICTURE X(5). C98970
102300 02 FILLER PICTURE S9(5). C98970
102400 02 FILLER PICTURE X(5). C98970
133000 FD OUT-FILE-NAME C98970
133200 RECORDING MODE IS F C98970
133300 BLOCK CONTAINS 40 RECORDS C98970
133400 RECORD CONTAINS 70 CHARACTERS C98970
133500 LABEL RECORDS ARE OMITTED C98970
133600 DATA RECORDS ARE OUT-REC-NAME. C98970
134000 01 OUT-REC-NAME SYNC. C98970
134100 02 FILLER PICTURE X(70). C98970
300000 WORKING-STORAGE SECTION. C98970
300500 77 PAGE-NAME SYNC COMPUTATIONAL PICTURE S999 VALUE ZERO. C98970
301300 77 LINE-NAME SYNC COMPUTATIONAL PICTURE S999 VALUE ZERO. C98970
301500 77 NO-LINE-PAGE SYNC COMPUTATIONAL PICTURE S999 VALUE <75. C98970
315000 01 OUT-DATA SYNC. C98970
315100 02 FILLER PICTURE X VALUE 1/1. C98970
31515 02 FILLER PICTURE X(06) VALUE SPACE. C98970
31520 02 OBS PICTURE ZZZZ9. C98970
31530 02 FILLER PICTURE XXX VALUE SPACE. C98970
31540 02 WUC-OUT PICTURE XXXXX. C98970
31550 02 FILLER PICTURE X(49) VALUE SPACE. C98970
31590 02 FILLER PICTURE X VALUE 1&1. C98970
320000 01 COM-TITLE-1 SYNC. C98970
32010 02 FILLER PICTURE X(32) VALUE C98970
32020 01 LISTING OF FREQUENCY OF REMOVAL PAGE 1. C98970
```

```

J2030      02 PAGE-RPT          PICTURE ZZ9.          C98970
J2040      02 FILLER           PICTURE X(34) VALUE SPACE. C98970
J2050      02 FILLER           PICTURE X VALUE !:!.      C98970
J2100      01 COM-TITLE-2 SYNC.          C98970
J2110      02 FILLER           PICTURE X(19) VALUE       C98970
J2120      :S                  FREQ      WUC1.           C98970
J2130      02 FILLER           PICTURE X(50) VALUE SPACE. C98970
J2140      02 FILLER           PICTURE X VALUE !:!.      C98970
J2300      01 TITLE-NON-ISC SYNC.        C98970
J2310      02 FILLER           PICTURE X(28) VALUE       C98970
J2320      :S                  FOR NON-ISOCRONAL A/C !.   C98970
J2330      02 FILLER           PICTURE X(41) VALUE SPACE. C98970
J2340      02 FILLER           PICTURE X VALUE !:!.      C98970
50000      PROCEDURE DIVISION.          C98970
50010      OPEN-FILES.                  C98970
50020      OPEN INPUT IN-FILE.          C98970
50040      OPEN OUTPUT OUT-FILE-NI.     C98970
50060      PERFORM TITLE-NI.            C98970
50100      READ-INPUT.                  C98970
50110      READ IN-FILE. AT END GO TO CLOSE-FILES.      C98970
50120      IF WUC IS EQUAL TO :99999: GO TO READ-INPUT. C98970
50130      MOVE WUC TO WUC-OUT.          C98970
50310      IF FREQ-NI IS EQUAL TO ZERO GO TO READ-INPUT. C98970
50320      MOVE FREQ-NI TO OBS.          C98970
50330      WRITE OUT-REC-NI FROM OUT-DATA. C98970
50340      ADD 1 TO LINE-NI.             C98970
50350      IF LINE-NI IS GREATER THAN NO-LINE-PAGE PERFORM TITLE-NI. C98970
50360      GO TO READ-INPUT.            C98970
50500      TITLE-NI.                   C98970
50510      ADD 1 TO PAGE-NI.             C98970
50520      MOVE PAGE-NI TO PAGE-RPT.     C98970
50530      WRITE OUT-REC-NI FROM COM-TITLE-1. C98970
50540      WRITE OUT-REC-NI FROM TITLE-NON-ISC. C98970
50550      WRITE OUT-REC-NI FROM COM-TITLE-2. C98970
50560      MOVE ZERO TO LINE-NI.         C98970
50600      CLOSE-FILES.                 C98970
50610      CLOSE IN-FILE,              OUT-FILE-NI WITH LOCK. C98970
50620      DISPLAY : E0J C9897 : UPON CONSOLE. C98970
50630      GOBACK.                     C98970
/* PLACE CONTROL SOURCE BEFORE
//CHG.TFGIN DD *,SPACE>(CYL,(1,1))
/* PLACE TFG DATA BEFORE THIS CARD
//TPR.TU12 DD DISP>(OLD,KEEP),VOL>(SER)>F1,UNIT>T+F1
//TPR.TU25 DD DISP>(OLD,PASS)
//TPR.TPHIN DD *,SPACE>(TRK,(1,1))
T/P TU12 10100202020
T/P TU25 1998070R000
/* PLACE T/P CONTROL CARDS BEFORE THIS CARD
//C9897R EXEC C9603N,TIME>01,ACCT>D35323007
//CHG.TU25 DD DSN>P.9897431,DISP>(OLD,DELETE)
//CHG.TPHIN DD *,SPACE>(TRK,(1,1))
T/P TU25 1998070R000
/* PLACE T/P CONTROL CARDS BEFORE THIS CARD

```

1440 CDS

T12  
025-PASS

025-IN

### 6.11.6 SORT ISOCRONAL FREQUENCY

```

//19897L JOB 01: G WANG : ,PRTY>02,TPRUN>HOLD
//C9897Q EXEC P9622N,W>199,TIME>01,ACCT>D35323007
//CHG.SORTIN DD DISP>(KEEP),UNIT>(T+F5,1,DEFER),
// DSN>E.9897431,
// VOL>(SER)>(F5,A+F5,B+F5,C+F5,D+F5,E+F5,F+F5,G+F5,H+F5, CT22 1
// I+F5,J+F5,K+F5,L+F5,M+F5,N+F5,O+F5,P+F5,Q+F5,R+F5,S+F5, CT22 2
// DCB>(LRECL>0020,BLKSIZE>1800),LABEL>(MSL,RETPD>099) CT22 3
// DD DISP>(KEEP),UNIT>(T+F1,1,DEFER),DSN>A.9897431, CT12 1
// VOL>(SER)>(F1,A+F1,B+F1,C+F1,D+F1,E+F1,F+F1,G+F1,H+F1, CT12 2
// I+F1,J+F1,K+F1,L+F1,M+F1,N+F1,O+F1,P+F1,Q+F1,R+F1,S+F1, CT12 3
// DCB>(LRECL>0020,BLKSIZE>1800)
//CHG.SYSIN DD *,DCB>(BLKSIZE>0080,SPACE>(TRK,(1,1))
SORT FIELDS>(006,005,CH,D,001,005,CH,A),SIZE>E0003000
MODS E15>(E15,008,SORT,18,N),E18>(E18,024,SORT,18,N)
/*

```

## 6.11.7 WRITE ISOCHRONAL FREQUENCY

```

//C9897L EXEC P965SL,TIME>01,ACCT>035323007 SE
//CHG,TU12 DD DISP>[PASS],UNIT>[T+F1,1,DEFER],DSN>+A.9897434, CT12 1
// VOL>SER>[+F1,A+F1,B+F1,C+F1,D+F1,E+F1,F+F1,G+F1,H+F1, CT12 2
// I+F1,J+F1,K+F1,L+F1,M+F1,N+F1,O+F1,P+F1,Q+F1,R+F1,S+F1] T12 3
//CHG,TU2S DD DSN>+P.9897431,SPACE>[CYL,[009,001]] D25-OUT
//CHG,INPUT DD *SPACE>[CYL,[1,1]] 1440 CDS
00000 COMLINE COMPILE G. WANG. C98970
01040 DATE-WRITTEN. 1 APR 72. C98970
01050 REMARKS. C98970
01060 MAINTENANCE STUDY PROGRAM SE. C98970
01070 PREPARES LISTING OF FREQUENCY OF REMOVAL [AIRCRAFT C98970
01080 SUB-SET 2] -V- WUC. C98970
01090 INPUT SORT SEQUENCE C98970
01100 FREQUENCY. C98970
02000 ENVIRONMENT DIVISION. C98970
02010 CONFIGURATION SECTION. C98970
02020 SOURCE-COMPUTER. IBM-360. C98970
02030 OBJECT-COMPUTER. IBM-360. C98970
02100 INPUT-OUTPUT SECTION. C98970
02110 FILE-CONTROL. C98970
02120 SELECT IN-FILE ASSIGN TO UT-S-TU12 C98970
02130 RESERVE 1 ALTERNATE AREA. C98970
02140 SELECT OUT-FILE-IS ASSIGN TO UT-S-TU2S C98970
02150 RESERVE 1 ALTERNATE AREA. C98970
10000 DATA DIVISION. C98970
10010 FILE SECTION. C98970
10100 FD IN-FILE C98970
10120 RECORDING MODE IS F C98970
10130 BLOCK CONTAINS 90 RECORDS C98970
10140 RECORD CONTAINS 20 CHARACTERS C98970
10150 LABEL RECORDS ARE OMITTED C98970
10160 DATA RECORDS ARE IN-REC. C98970
10200 01 IN-REC SYNC. C98970
10210 02 WUC PICTURE X[5]. C98970
10220 02 FREQ-ISC PICTURE S9[5]. C98970
10230 02 FILLER PICTURE X[10]. C98970
11300 FD OUT-FILE-IS C98970
11320 RECORDING MODE IS F C98970
11330 BLOCK CONTAINS 40 RECORDS C98970
11340 RECORD CONTAINS 70 CHARACTERS C98970
11350 LABEL RECORDS ARE OMITTED C98970
11360 DATA RECORDS ARE OUT-REC-IS. C98970
11400 01 OUT-DATA-IS SYNC. C98970
11410 02 FILLER PICTURE X[70]. C98970
30000 WORKING-STORAGE SECTION. C98970
30060 77 PAGE-IS SYNC COMPUTATIONAL PICTURE S999 VALUE ZERO. C98970
30140 77 LINE-IS SYNC COMPUTATIONAL PICTURE S999 VALUE ZERO. C98970
30150 77 NO-LINE-PAGE SYNC COMPUTATIONAL PICTURE S999 VALUE <75, C98970
31500 01 OUT-DATA SYNC. C98970
31510 02 FILLER PICTURE X VALUE 1/1. C98970
31515 02 FILLER PICTURE X[07] VALUE SPACE. C98970
31520 02 OBS PICTURE ZZZZ9. C98970
31530 02 FILLER PICTURE XX VALUE SPACE. C98970
31540 02 WUC-OUT PICTURE XXXXX. C98970
31550 02 FILLER PICTURE X[49] VALUE SPACE. C98970
31590 02 FILLER PICTURE X VALUE 121. C98970
32000 01 COM-TITLE-1 SYNC. C98970
32010 02 FILLER PICTURE X[32] VALUE C98970
32020 01 LISTING OF FREQ - WUC PAGE1. C98970
32030 02 PAGE-RP1 PICTURE Z29. C98970
32040 02 FILLER PICTURE X[34] VALUE SPACE. C98970
32050 02 FILLER PICTURE X VALUE 121. C98970
32100 01 COM-TITLE-2 SYNC. C98970
32110 02 FILLER PICTURE X[19] VALUE C98970
32120 01 FREQ WUC1. C98970
32130 02 FILLER PICTURE X[50] VALUE SPACE. C98970
32140 02 FILLER PICTURE X VALUE 121. C98970
32200 01 TITLE-ISC SYNC. C98970
32210 02 FILLER PICTURE X[24] VALUE C98970
32220 01 FOR ISOCHRONAL A/C 1. C98970
32230 02 FILLER PICTURE X[45] VALUE SPACE. C98970
32240 02 FILLER PICTURE X VALUE 121. C98970
50000 PROCEDURE DIVISION. C98970
50010 OPEN-FILES. C98970
50020 OPEN INPUT IN-FILE. C98970
50040 OPEN OUTPUT OUT-FILE-IS. C98970
50050 PERFORM TITLE-15. C98970

```

```

50100 READ-INPUT. C98970
50110 READ IN-FILE. AT END GO TO CLOSE-FILES. C98970
50120 IF WUC IS EQUAL TO :99999: GO TO READ-INPUT. C98970
50130 MOVE WUC TO WUC-OUT. C98970
50140 IF FREQ-ISC IS EQUAL TO ZERO GO TO READ-INPUT. C98970
50150 MOVL FREQ-ISC TO OBS. C98970
50160 WRITE OUT-DATA-1S FROM OUT-DATA. C98970
50170 ADD 1 TO LINE-1S. C98970
50180 IF LINE-1S IS GREATER THAN NO-LINE-PAGE PERFORM TITLE-1S. C98970
50360 GO TO READ-INPUT. C98970
50400 TITLE-1S. C98970
50410 ADD 1 TO PAGE-1S. C98970
50420 MOVE PAGE-1S TO PAGE-RPT. C98970
50430 WRITE OUT-DATA-1S FROM COM-TITLE-1. C98970
50440 WRITE OUT-DATA-1S FROM TITLE-ISC. C98970
50450 WRITE OUT-DATA-1S FROM COM-TITLE-2. C98970
50460 MOVE ZERO TO LINE-1S. C98970
50600 CLOSE-FILES. C98970
50610 CLOSE IN-FILE, OUT-FILE-1S WITH LOCK. C98970
50620 DISPLAY : EJJ C9897 : UPON CONSOLE. C98970
50630 GORACK. C98970
/* PLACE COBOL SOURCE BEFORE
//CHG,TF6IN DD *.SPACE>(CYL,(1,1)) 1440 CDS
/* PLACE TFG DATA BEFORE THIS CARD
//TPR,TU12 DD DISP>(OLD,KEEP),VOL>SER>+F1,UNIT>T+F1 T12
//TPR,TU25 DD DISP>(OLD,PASS) D25-PASS
//TPR,TPRIN DD *.SPACE>(TRK,(1,1))
T/P TU12 1010020ZC20
T/P TU25 1998070R000
/* PLACE T/P CONTROL CARDS BEFORE THIS CARD
//C9897R EXEC C9603N,TIME>01,ACCT>D35323007
//CHG,TU25 DD DSN>+P.9897431,DISP>(OLD,DELETE) D25-IN
//CHG,TPRIN DD *.SPACE>(TRK,(1,1))
T/P TU25 1998070R000
/* PLACE T/P CONTROL CARDS BEFORE THIS CARD

```

## 6.11.8 SORT REMOVAL INTERVALS

```

//T9897H JOB 01: G. WANG : ,PRTY>02,TPRUN>HOLD
//C9897G EXEC P9622N,TIME>199,TIME>05,ACCT>D35323007 505
//CHG,SORTIN DD DISP>(KEEP),UNIT>(A+F5,2,DEFER), CT22/23 1
// DSN>+E.9897435, CT22 2
// VOL>SER>(A+F5,A+F5,B+F5,C+F5,D+F5,E+F5,F+F5,G+F5,H+F5, CT22 3
// 1+F5,J+F5,K+F5,L+F5,M+F5,N+F5,O+F5,P+F5,Q+F5,R+F5,S+F5),CT22 4
// DCB>(LRECL>0020,BLKSIZE>1800),LABEL>(NSL,RETPD>099)
//CHG,SORTOUT DD DISP>(KEEP),UNIT>(A+F1,2,DEFER),DSN>+A.9897436, CT12/13 1
// VOL>SER>(A+F1,A+F1,B+F1,C+F1,D+F1,E+F1,F+F1,G+F1,H+F1, CT12 2
// 1+F1,J+F1,K+F1,L+F1,M+F1,N+F1,O+F1,P+F1,Q+F1,R+F1,S+F1),CT12 3
// DCB>(LRECL>0020,BLKSIZE>1800)
//CHG,SYSIN DD *.DCB>BLKSIZE>0080,SPACE>(TRK,(1,1))
SORT FIELDS>(017,001,CH,A,019,001,CH,A,001,005,CH,A),SIZE>(02000000
MODS E15>(E15,008,SORTLIB,N),E16>(E16,024,SORTLIB,N)
/*

```

## 6.11.9 CUMULATIVE DISTRIBUTION OF REMOVAL INTERVALS

```

//C9897H EXEC P9655L,TIME>07,ACCT>D35323007 50
//CHG,TU12 DD DISP>(PASS),UNIT>(T+F1,1,DEFER),DSN>+A.9897436, CT12 1
// VOL>SER>(A+F1,A+F1,B+F1,C+F1,D+F1,E+F1,F+F1,G+F1,H+F1, CT12 2
// 1+F1,J+F1,K+F1,L+F1,M+F1,N+F1,O+F1,P+F1,Q+F1,R+F1,S+F1) T12 3
//CHG,TU24 DD DISP>(PASS),UNIT>(T+F7,1,DEFER),DSN>+G.9897437, CT24 1
// VOL>SER>(A+F7,A+F7,B+F7,C+F7,D+F7,E+F7,F+F7,G+F7,H+F7, CT24 2
// 1+F7,J+F7,K+F7,L+F7,M+F7,N+F7,O+F7,P+F7,Q+F7,R+F7,S+F7) T24 3
//CHG,INPUT DD *.SPACE>(CYL,(1,1)) 1440 CDS
00000 COMBINE COMPILE G. WANG. C98970
01040 DATE-WRITTEN. 7 APR 72. C98970
01050 REMARKS. C98970
01060 TASK 50 HIST OF WUC. C98970
02000 ENVIRONMENT DIVISION. C98970
02010 CONFIGURATION SECTION. C98970
02020 SOURCE-COMPUTER. IBM-360. C98970
02030 OBJECT-COMPUTER. IBM-360. C98970
02100 INPUT-OUTPUT SECTION. C98970
02110 FILE-CONTROL. C98970
02120 SELECT IN-FILE ASSIGN TO UT-S-TU12 C98970
02130 RESERVE 1 ALTERNATE AREA. C98970
02140 SELECT HIST-FILE ASSIGN TO UT-S-TU24 C98970
02150 RESERVE 1 ALTERNATE AREA. C98970
09000 SELECT CUT-OFF-FILE ASSIGN TO DA-S-DT03 C98970
09010 RESERVE 1 ALTERNATE AREA. C98970

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10000	DATA DIVISION.		C98970
10010	FILE SECTION.		C98970
11100	FD IN-FILE		C98970
11120	RECORDING MODE IS F		C98970
11130	BLOCK CONTAINS 90 RECORDS		C98970
11140	RECORD CONTAINS 20	CHARACTERS	C98970
11150	LABEL RECORDS ARE OMITTED		C98970
11160	DATA RECORDS ARE IN-REC.		C98970
11170	01 IN-REC SYNC.		C98970
11180	02 WUC	PICTURE X(5).	C98970
11182	02 FILLER	PICTURE X(4).	C98970
11183	02 OBS	PICTURE S9(6).	C98970
11184	02 OBS-1 REDEFINES OBS	PICTURE S99999V9.	C98970
11185	02 FILLER	PICTURE X.	C98970
11186	02 ISCHROMAL-NEW	PICTURE X.	C98970
11187	02 FILLER	PICTURE X.	C98970
11188	02 DATA-TYPE-NEW	PICTURE X.	C98970
11189	02 FILLER	PICTURE X.	C98970
12100	FD HIST-FILE		C98970
12120	RECORDING MODE IS F		C98970
12130	BLOCK CONTAINS 15 RECORDS		C98970
12140	RECORD CONTAINS 130	CHARACTERS	C98970
12150	LABEL RECORDS ARE OMITTED		C98970
12160	DATA RECORDS ARE HIST-REC.		C98970
12170	01 HIST-REC SYNC.		C98970
12180	02 FILLER	PICTURE X(130).	C98970
29000	FD CUT-OFF-FILE		C98970
29010	RECORDING MODE IS F		C98970
29020	BLOCK CONTAINS 20 RECORDS		C98970
29030	RECORD CONTAINS 80	CHARACTERS	C98970
29040	LABEL RECORDS ARE STANDARD		C98970
29050	DATA RECORDS ARE CUT-OFF-REC.		C98970
29060	01 CUT-OFF-REC SYNC.		C98970
29070	05 NI-CUT-OFF	PICTURE 9(5).	C98970
29080	05 ISO-CUT-OFF	PICTURE 9(5).	C98970
29090	05 FILLER	PICTURE X(70).	C98970
30000	WORKING-STORAGE SECTION.		C98970
30010	77 KNT SYNC PICTURE S9(5).		C98970
30020	01 FILLER SYNC.		C98970
30030	02 FRG-HIST-VALUE OCCURS 1000 TIMES PICTURE S9(5)		C98970
30040	COMPUTATIONAL.		C98970
30050	01 A PICTURE S9(5) COMPUTATIONAL.		C98970
30060	01 NO-OF-HISTS SYNC	PICTURE 9999 VALUE ZERO.	C98970
30070	01 TWO SYNC	PICTURE X VALUE 121.	C98970
30080	01 ONE SYNC	PICTURE X VALUE 11.	C98970
30090	01 CNT SYNC	PICTURE S9(5) COMPUTATIONAL.	C98970
30100	01 CUR-WUC-T SYNC.		C98970
30110	02 FILLER	PICTURE X(5) VALUE 1 WUC>1.	C98970
30120	02 CUR-WUC	PICTURE X(5).	C98970
30170	01 ISCHRONAL SYNC	PICTURE X.	C98970
30180	01 DATA-TYPE SYNC	PICTURE X.	C98970
30190	01 MINUS-ONE COMPUTATIONAL	PICTURE S999 VALUE -1 SYNC.	C98970
32000	01 REPORT-ID SYNC.		C98970
32010	02 FILLER	PICTURE X(50) VALUE	C98970
32020	151897C60 TF7919-02 142-A 1 1/2		C98970
32030	02 FILLER	PICTURE X(50) VALUE SPACE,	C98970
32040	02 FILLER	PICTURE X(30) VALUE	C98970
32050	:	11.	C98970
46000	01 MEAN COMPUTATIONAL SYNC	PICTURE S9(7)V99.	C98970
46010	01 VARIANCE COMPUTATIONAL SYNC	PICTURE S9(7)V99.	C98970
46020	01 TEMP-COMP	PICTURE S9(7)V99.	C98970
46100	01 MEAN-VARIANCE-LINE SYNC.		C98970
46110	02 FILLER	PICTURE X(50) VALUE	C98970
46120	15		C98970
46130	02 FILLER	PICTURE X(19) VALUE	C98970
46140	:	MEAN >1.	C98970
46150	02 MEAN-RPT	PICTURE ZZZ9.9.	C98970
46160	02 FILLER	PICTURE X(30) VALUE	C98970
46170	:	VARIANCE >1.	C98970
46180	02 VARIANCE-RPT	PICTURE ZZZZZZ9.9.	C98970
46190	02 FILLER	PICTURE X(16) VALUE	C98970
46200	:	11.	C98970
47000	01 HIST-VALUE-MAX SYNC	PICTURE S9999V99 VALUE -9999.9.	C98970
47010	01 HIST-VALUE-MIN SYNC	PICTURE S9999V99 VALUE 9999.9.	C98970
47020	01 HIST-NO-OF-OBS SYNC	PICTURE S9(5) VALUE ZERO.	C98970
47030	01 HIST-NO-OF-INTERVALS SYNC	PICTURE 999V99 VALUE 50.	C98970
47040	01 HIST-INPUT-VMAX-VMIN SYNC	PICTURE 9 VALUE ZERO.	C98970
47050	01 HIST-DIST SYNC	PICTURE X VALUE 111.	C98970
47060	01 HIST-INDEX SYNC COMPUTATIONAL		C98970
47070		PICTURE S999 VALUE ZERO.	C98970
47080	01 HIST-INDEX-2 SYNC COMPUTATIONAL		C98970
47090		PICTURE S999 VALUE ZERO.	C98970
47100	01 HIST-TEMP SYNC	PICTURE S99999V99 VALUE ZERO.	C98970
47110	01 HIST-INTERVAL-SIZE SYNC	PICTURE S999V99 VALUE ZERO	C98970



47120		COMPUTATIONAL.			C98970
47150	01	HIST-FLAG SYNC	PICTURE X	VALUE 101.	C98970
47160	01	HIST-SCALE-VALUE SYNC COMPUTATIONAL			C98970
47170			PICTURE S999	VALUE <1.	C98970
47180	01	HIST-PERCENT SYNC	PICTURE S999V99	COMPUTATIONAL.	C98970
47190	01	HIST-CUM SYNC	PICTURE S999V99	COMPUTATIONAL.	C98970
47200	01	HIST-LINE SYNC COMPUTATIONAL			C98970
47210			PICTURE S999	VALUE ZERO.	C98970
47220	01	HIST-PAGE-FLAG SYNC	PICTURE S999	VALUE <75.	C98970
47230	01	HIST-LINE-CNT SYNC	PICTURE S999.		C98970
47300	01	HIST-ERR-1 SYNC	PICTURE XC103	VALUE	C98970
47310		ERROR NO 01.			C98970
47320	01	HIST-ERR-3 SYNC.			C98970
47330	02	FILLER	PICTURE XC53	VALUE 185 > 1.	C98970
47340	02	HIST-ERR-2	PICTURE S9C53	VALUE ZERO.	C98970
47350	01	HIST-ERR-4 SYNC	PICTURE XC103	VALUE	C98970
47360		ERROR MAX1.			C98970
47370	01	HIST-ERR-5 SYNC	PICTURE XC103	VALUE	C98970
47380		MIN BAD. 1.			C98970
47390	01	HIST-OUT-RANGE-VALUE SYNC	PICTURE S999	COMPUTATIONAL.	C98970
47500	01	FILLER SYNC.			C98970
47510	02	FILLER OCCURS 200 TIMES.			C98970
47530	03	HIST-TABLE	PICTURE S9C53	COMPUTATIONAL.	C98970
47540	03	HIST-UPPER-LIMIT	PICTURE S999V99	COMPUTATIONAL.	C98970
47550	03	HIST-TABLE-SCALED	PICTURE S999	COMPUTATIONAL.	C98970
47560	01	HIST-NEW-PAGE SYNC.			C98970
47570	02	FILLER	PICTURE X	VALUE 111.	C98970
47580	02	FILLER	PICTURE XC1223	VALUE SPACE.	C98970
47582	02	FILLER	PICTURE XC53	VALUE 1PAGE 1.	C98970
47584	02	HIST-PAGE-NO	PICTURE 9.		C98970
47590	02	FILLER	PICTURE X	VALUE 121.	C98970
47600	01	HIST-TITLE SYNC.			C98970
47610	02	FILLER	PICTURE XC33	VALUE 15 1.	C98970
47620	02	HIST-TITLE-1.			C98970
47621	03	FILLER	PICTURE XC103	VALUE SPACE.	C98970
47630	02	HIST-TITLE-2.			C98970
47631	03	FILLER	PICTURE XC103	VALUE SPACE.	C98970
47640	02	HIST-TITLE-3	PICTURE XC103	VALUE SPACE.	C98970
47650	02	HIST-TITLE-4	PICTURE XC103	VALUE SPACE.	C98970
47660	02	FILLER	PICTURE XC243	VALUE	C98970
47670		NO OF OBSERVATIONS >1.			C98970
47680	02	HIST-NO-OF-ORIS-RPT	PICTURE ZZZZ9.		C98970
47690	02	FILLER	PICTURE XC133	VALUE	C98970
47700		VALUE MAX > 1.			C98970
47710	02	HIST-VALUE-MAX-RPT	PICTURE -----9.		C98970
47720	02	FILLER	PICTURE XC133	VALUE	C98970
47730		VALUE MIN > 1.			C98970
47740	02	HIST-VALUE-MIN-RPT	PICTURE -----9.		C98970
47750	02	FILLER	PICTURE XC183	VALUE	C98970
47760		1.			C98970
47900	01	HIST-OUT-LINE SYNC.			C98970
47910	02	FILLER	PICTURE XC503	VALUE	C98970
47920		1/-----1.			C98970
47922	02	FILLER	PICTURE XC803	VALUE	C98970
47930		1/-----1.			C98970
47940		1/-----1.			C98970
47950	01	HIST-LABEL SYNC.			C98970
47960	02	FILLER	PICTURE XC1503	VALUE	C98970
47970		1/ MIDPNT PCNT			C98970
47974	02	FILLER	PICTURE XC803	VALUE	C98970
47980		125...30...35...40...45...50...55...60...65...70...75...80...			C98970
47990		185...90...95...100...1.			C98970
48000	01	HIST-LINE-OUT SYNC.			C98970
48010	02	FILLER	PICTURE X	VALUE 1/1.	C98970
48020	02	HIST-LINE-RPT	PICTURE Z29.		C98970
48030	02	FILLER	PICTURE X	VALUE SPACE.	C98970
48040	02	HIST-MID-POINT-RPT	PICTURE -----9.		C98970
48060	02	HIST-PERCENT-RPT	PICTURE Z29.9.		C98970
48070	02	FILLER	PICTURE X	VALUE SPACE.	C98970
48080	02	HIST-CUM-RPT	PICTURE Z29.9.		C98970
48100	02	HIST-FREQ-RPT	PICTURE ZZZZ9.		C98970
48110	02	FILLER	PICTURE X	VALUE SPACE.	C98970
48120	02	HIST-POINT OCCURS 100 TIMES			C98970
48130		PICTURE X.			C98970
48140	02	FILLER	PICTURE X	VALUE 121.	C98970
48150	01	HIST-OUT-RANGE-REC SYNC.			C98970
48160	02	FILLER	PICTURE XC353	VALUE	C98970
48170		1. NUMBER OF OUT OF RANGE VALUES >1.			C98970
48180	02	HIST-OUT-RANGE-RPT	PICTURE Z29.		C98970
48190	02	FILLER	PICTURE XC913	VALUE SPACE.	C98970
48191	02	FILLER	PICTURE X	VALUE 121.	C98970
48200	01	HIST-SCALE-LINE SYNC.			C98970
48210	02	FILLER	PICTURE XC273	VALUE	C98970
48220		1/ SCALING FACTOR > 1.			C98970
48230	02	HIST-SCALE-RPT	PICTURE Z29.		C98970
48240	02	FILLER	PICTURE XC0993	VALUE SPACE.	C98970
48250	02	FILLER	PICTURE X	VALUE 121.	C98970

48300	01 FILLER SYNC.	C98970
48310	02 HIST-VALUE OCCURS 1000 TIMES	C98970
48320	PICTURE \$9999V9 COMPUTATIONAL.	C98970
50000	PROCEDURE DIVISION.	C98970
50001	OPEN INPUT; CUT-OFF-FILL.	C98970
50002	HEAD CUT-OFF-FILE AT END GO TO CLOSE-FILES.	C98970
50003	CLOSE CUT-OFF-FILE WITH LOCK.	C98970
50010	OPEN INPUT; IN-FILE.	C98970
50020	OPEN OUTPUT HIST-FILE.	C98970
50030	MOVE 1000 TO KNT.	C98970
50040	PERFORM RESET-TABLE THRU END-RST-TABLE.	C98970
50050	HEAD IN-FILE, AT END GO TO CLOSE-FILES.	C98970
50060	WRITE HIST-REC FROM REPORT-ID.	C98970
50100	PARA-1.	C98970
50110	MOVE 1 TO HIST-NO-OF-OBS.	C98970
50120	MOVE WUC TO CUR-WUC.	C98970
50140	MOVE DATA-TYPE-NEW TO DATA-TYPE.	C98970
50150	MOVE ISCHRONAL-NEW TO ISCHRONAL.	C98970
50160	IF DATA-TYPE IS EQUAL TO ONE GO TO WEEKS-DATA ELSE GO TO	C98970
50170	FLT-DATA.	C98970
50200	READ1.	C98970
50210	HEAD IN-FILE, AT END GO TO CLOSE-FILES.	C98970
50220	IF DATA-TYPE-NEW IS EQUAL TO 191 GO TO CLOSE-FILES.	C98970
50230	IF WUC IS NOT EQUAL TO CUR-WUC GO TO PARA-2.	C98970
50250	ADD 1 TO HIST-NO-OF-OBS.	C98970
50260	IF DATA-TYPE IS EQUAL TO ONE GO TO WEEKS-DATA ELSE GO TO	C98970
50270	FLT-DATA.	C98970
50300	PARA-2.	C98970
50310	PERFORM SET-HISTOG THRU END-SH.	C98970
50320	PERFORM RESET-TABLE THRU END-RST-TABLE.	C98970
50330	GO TO PARA-1.	C98970
50400	RESET-TABLE.	C98970
50410	MOVE ZERO TO CNT.	C98970
50420	RST.	C98970
50430	ADD 1 TO CNT.	C98970
50440	MOVE MINUS-ONE TO HIST-VALUE [CNT].	C98970
50445	MOVE ZERO TO FREQ-HIST-VALUE [CNT].	C98970
50450	IF CNT IS LESS THAN KNT GO TO RST.	C98970
50455	MOVE ZERO TO KNT.	C98970
50460	END-RST-TABLE. EXIT.	C98970
50510	SET-HISTOG.	C98970
50512	IF ISCHRONAL IS EQUAL TO ONE AND HIST-NO-OF-OBS IS NOT	C98970
50514	GREATER THAN ISO-CUT-OFF GO TO END-SH.	C98970
50516	IF ISCHRONAL IS EQUAL TO TWO AND HIST-NO-OF-OBS IS NOT	C98970
50518	GREATER THAN NI-CUT-OFF GO TO END-SH.	C98970
50520	IF ISCHRONAL IS EQUAL TO ONE MOVE 1 ISO 1 TO	C98970
50530	HIST-TITLE-4, ELSE MOVE 1 NON-ISO 1 TO HIST-TITLE-4.	C98970
50540	IF DATA-TYPE IS EQUAL TO ONE MOVE 1 WEEKS 1 TO	C98970
50550	HIST-TITLE-3, ELSE MOVE 1 FLT-HOURS1 TO HIST-TITLE-3.	C98970
50560	MOVE CUR-WUC-T TO HIST-TITLE-1.	C98970
50590	PERFORM WRITE-HISTOGRAM THRU END-HIST.	C98970
50600	IF HIST-FLAG IS EQUAL TO 11 THEN GO TO CFI.	C98970
50610	ADD 1 TO NO-OF-HISTS.	C98970
50620	END-SH. EXIT.	C98970
51000	WEEKS-DATA.	C98970
51010	MOVE ZERO TO CNT.	C98970
51020	WEEK-A.	C98970
51030	ADD 1 TO CNT.	C98970
51040	IF OBS IS EQUAL TO HIST-VALUE [CNT] GO TO WEEK-C.	C98970
51050	IF FREQ-HIST-VALUE [CNT] IS EQUAL TO ZERO GO TO WEEK-B.	C98970
51060	IF CNT IS LESS THAN 1000 GO TO WEEK-A.	C98970
51070	DISPLAY 1 MORE THAN 1000 FREQUENCY OCCURRENCES 1 UPON CONSOLE.	C98970
51080	GO TO CFI.	C98970
51090	WEEK-B.	C98970
51100	MOVE OBS TO HIST-VALUE [CNT].	C98970
51110	IF CNT IS GREATER THAN KNT THEN MOVE CNT TO KNT.	C98970
51120	WEEK-C.	C98970
51130	ADD 1 TO FREQ-HIST-VALUE [CNT].	C98970
51140	GO TO READ1.	C98970
52000	FLT-DATA.	C98970
52010	MOVE ZERO TO CNT.	C98970
52020	FLT-A.	C98970
52030	ADD 1 TO CNT.	C98970
52040	IF OBS-1 IS EQUAL TO HIST-VALUE [CNT] GO TO FLT-C.	C98970
52050	IF FREQ-HIST-VALUE [CNT] IS EQUAL TO ZERO GO TO FLT-B.	C98970
52060	IF CNT IS LESS THAN 1000 GO TO FLT-A.	C98970
52070	DISPLAY 1 MORE THAN 1000 FREQUENCY OCCURRENCES 1 UPON CONSOLE.	C98970
52080	GO TO CFI.	C98970
52090	FLT-B.	C98970
52100	MOVE OBS-1 TO HIST-VALUE [CNT].	C98970
52110	IF CNT IS GREATER THAN KNT THEN MOVE CNT TO KNT.	C98970
52120	FLT-C.	C98970
52130	ADD 1 TO FREQ-HIST-VALUE [CNT].	C98970
52140	GO TO READ1.	C98970
52200	CLOSE-FILES.	C98970
52205	PERFORM SET-HISTOG THRU END-SH.	C98970

52207	CF1.	C98970
52210	CLOSE IN-FILE, HIST-FILE.	C98970
52211	IF HIST-FLAG IS EQUAL TO 11: DISPLAY 1 HIST ERROR 1 UPON	C98970
52212	CONSOLE.	C98970
52215	DISPLAY 1 NO OF HISTOGRAMS > 1 NO-OF-HISTS UPON CONSOLE.	C98970
52220	DISPLAY 1 EOL C9897 1 UPON CONSOLE.	C98970
52230	GORACK.	C98970
95000	COMPUTE-MEAN-VARIANCE.	C98970
95010	MOVE ZERO TO CNT.	C98970
95020	MOVE ZERO TO MEAN.	C98970
95030	CMV-1.	C98970
95040	ADD 1 TO CNT.	C98970
95050	COMPUTE TEMP-COMP > HIST-VALUE [CNT] * FREQ-HIST-VALUE [CNT].	C98970
95060	ADD TEMP-COMP TO MEAN.	C98970
95070	IF CNT IS LESS THAN KNT GO TO CMV-1.	C98970
95080	DIVIDE HIST-NO-OF-OBS INTO MEAN.	C98970
95090	MOVE ZERO TO CNT.	C98970
95100	MOVE ZERO TO VARIANCE.	C98970
95105	IF HIST-NO-OF-OBS IS LESS THAN 2 GO TO END-CMV.	C98970
95110	CMV-2.	C98970
95120	ADD 1 TO CNT.	C98970
95130	COMPUTE TEMP-COMP > [(HIST-VALUE [CNT] - MEAN) ** 2] * FREQ-HIST-VALUE [CNT].	C98970
95140	ADD TEMP-COMP TO VARIANCE.	C98970
95160	IF CNT IS LESS THAN KNT GO TO CMV-2.	C98970
95170	COMPUTE VARIANCE > VARIANCE / [HIST-NO-OF-OBS - 1].	C98970
95180	MOVE MEAN TO MEAN-RPT.	C98970
95190	MOVE VARIANCE TO VARIANCE-RPT.	C98970
95200	WRITE HIST-REC FROM MEAN-VARIANCE-LINE.	C98970
95290	END-CMV. EXIT.	C98970
97000	WRITE-HISTOGRAM.	C98970
97080	MOVE 10: TO HIST-FLAG.	C98970
97090	MOVE ZERO TO HIST-OUT-RANGE-VALUE.	C98970
97100	MOVE ZERO TO HIST-PAGE-NO.	C98970
97140	MOVE -9999.9 TO HIST-VALUE-MAX.	C98970
97150	MOVE 9999.9 TO HIST-VALUE-MIN.	C98970
97200	MOVE ZERO TO HIST-INDEX.	C98970
97210	HIST-FIND-VMAX-VMIN.	C98970
97220	ADD 1 TO HIST-INDEX.	C98970
97230	MOVE HIST-VALUE [HIST-INDEX] TO HIST-TEMP.	C98970
97240	IF HIST-TEMP IS GREATER THAN HIST-VALUE-MAX THEN MOVE HIST-TEMP TO HIST-VALUE-MAX.	C98970
97260	IF HIST-TEMP IS LESS THAN HIST-VALUE-MIN THEN MOVE HIST-TEMP TO HIST-VALUE-MIN.	C98970
97270	IF HIST-INDEX IS LESS THAN KNT THEN GO TO HIST-FIND-VMAX-VMIN.	C98970
97290	IF DATA-TYPE IS EQUAL TO ONE COMPUTE HIST-NO-OF-INTERVALS > HIST-VALUE-MAX < 4.	C98970
97294	IF DATA-TYPE IS EQUAL TO TWO COMPUTE HIST-NO-OF-INTERVALS > HIST-VALUE-MAX / 8 < 4.	C98970
97296	HIST-PRINT-TITLE.	C98970
97301	IF HIST-NO-OF-INTERVALS IS LESS THAN 50 MOVE 50 TO HIST-NO-OF-INTERVALS.	C98970
97302	ADD 1 TO HIST-PAGE-NO.	C98970
97306	MOVE 5 TO HIST-LINE-CNT.	C98970
97310	WRITE HIST-REC FROM HIST-NEW-PAGE.	C98970
97320	MOVE HIST-NO-OF-OBS TO HIST-NO-OF-OBS-RPT.	C98970
97330	MOVE HIST-VALUE-MAX TO HIST-VALUE-MAX-RPT.	C98970
97340	MOVE HIST-VALUE-MIN TO HIST-VALUE-MIN-RPT.	C98970
97350	WRITE HIST-REC FROM HIST-TITLE.	C98970
97355	PERFORM COMPUTE-MEAN-VARIANCE THRU END-CMV.	C98970
97360	WRITE HIST-REC FROM HIST-DOT-LINE.	C98970
97370	WRITE HIST-REC FROM HIST-LABEL.	C98970
97380	WRITE HIST-REC FROM HIST-DOT-LINE.	C98970
97390	HIST-DUMMY.	C98970
97410	IF HIST-VALUE-MAX IS LESS THAN HIST-VALUE-MIN THEN GO TO HIST-ERROR-2.	C98970
97420	IF HIST-NO-OF-INTERVALS IS GREATER THAN 200 THEN MOVE 200 TO HIST-NO-OF-INTERVALS.	C98970
97440	MOVE ZERO TO HIST-INDEX.	C98970
97442	HIST-RST.	C98970
97443	ADD 1 TO HIST-INDEX.	C98970
97444	MOVE ZERO TO HIST-TABLE [HIST-INDEX].	C98970
97445	IF HIST-INDEX IS LESS THAN HIST-NO-OF-INTERVALS THEN GO TO HIST-RST.	C98970
97446	IF DATA-TYPE IS EQUAL TO ONE MOVE 1.0 TO HIST-INTERVAL-SIZE.	C98970
97450	ELSE MOVE 8.0 TO HIST-INTERVAL-SIZE.	C98970
97460	NOTE COMPUTE UPPER LIMIT FOR EACH INTERVAL.	C98970
97500	MOVE ZERO TO HIST-INDEX.	C98970
97510		C98970

97520	MOVE ZERO	TO HIST-TEMP.	C98970
97530	HIST-INC-INTERVAL.		C98970
97540	ADD 1 TO HIST-INDEX.		C98970
97550	ADD HIST-INTERVAL-SIZE TO HIST-TEMP.		C98970
97560	MOVE HIST-TEMP TO HIST-UPPER-LIMIT [HIST-INDEX].		C98970
97570	IF HIST-INDEX IS LESS THAN HIST-NO-OF-INTERVALS THEN		C98970
97580	GO TO HIST-INC-INTERVAL.		C98970
97600	NOTE PLACE OCCURANCE INTO APPROPRIATE CHANNEL.		C98970
97610	MOVE ZERO TO HIST-INDEX-2.		C98970
97620	HIST-OCCURANCE.		C98970
97630	ADD 1 TO HIST-INDEX-2.		C98970
97640	MOVE HIST-VALUE [HIST-INDEX-2] TO HIST-TEMP.		C98970
97650	MOVE ZERO TO HIST-INDEX.		C98970
97660	HIST-INTERVAL.		C98970
97670	ADD 1 TO HIST-INDEX.		C98970
97675	MOVE HIST-VALUE [HIST-INDEX-2] TO A.		C98970
97680	IF HIST-TEMP IS NOT GREATER THAN HIST-UPPER-LIMIT		C98970
97690	[HIST-INDEX] THEN GO TO HIST-ADD-TABLE.		C98970
97700	IF HIST-INDEX IS LESS THAN HIST-NO-OF-INTERVALS THEN GO TO		C98970
97710	HIST-INTERVAL.		C98970
97720	ADD A TO HIST-OUT-RANGE-VALUE.		C98970
97730	GO TO HIST-NO-AUD.		C98970
97740	HIST-ADD-TABLE.		C98970
97750	ADD A TO HIST-TABLE [HIST-INDEX].		C98970
97751	HIST-NO-AUD.		C98970
97760	IF HIST-INDEX-2 IS LESS KNT	GO TO HIST-OCCURANCE.	C98970
97800	NOTE COMPUTE SCALE VALUE.		C98970
97810	MOVE HIST-TABLE [1] TO HIST-TEMP.		C98970
97820	MOVE 1 TO HIST-INDEX.		C98970
97830	HIST-SCALE.		C98970
97840	ADD 1 TO HIST-INDEX.		C98970
97850	IF HIST-TABLE [HIST-INDEX] IS GREATER THAN HIST-TEMP THEN		C98970
97860	MOVE HIST-TABLE [HIST-INDEX] TO HIST-TEMP.		C98970
97870	IF HIST-INDEX IS LESS THAN HIST-NO-OF-INTERVALS THEN GO TO		C98970
97880	HIST-SCALE.		C98970
97890	COMPUTE HIST-SCALE-VALUE > [HIST-TEMP < 99] / 100.		C98970
97895	IF HIST-SCALE-VALUE IS LESS THAN 1 MOVE 1 TO		C98970
97896	HIST-SCALE-VALUE.		C98970
97900	MOVE ZERO TO HIST-INDEX.		C98970
97910	HIST-SCALED-VALUES.		C98970
97920	ADD 1 TO HIST-INDEX.		C98970
97930	COMPUTE HIST-TABLE-SCALED [HIST-INDEX] >		C98970
97940	HIST-TABLE [HIST-INDEX] / HIST-SCALE-VALUE.		C98970
97950	IF HIST-INDEX IS LESS THAN HIST-NO-OF-INTERVALS THEN GO TO		C98970
97960	HIST-SCALED-VALUES.		C98970
98000	NOTE PREPARE OUTPUT DATA.		C98970
98010	DIVIDE 2 INTO HIST-INTERVAL-SIZE.		C98970
98020	MOVE ZERO TO HIST-CUM.		C98970
98030	MOVE ZERO TO HIST-LINE.		C98970
98040	HIST-PREPARE.		C98970
98050	ADD 1 TO HIST-LINE.		C98970
98060	MOVE HIST-LINE TO HIST-LINE-RPT.		C98970
98070	COMPUTE HIST-TEMP > HIST-UPPER-LIMIT [HIST-LINE]		C98970
98080	- HIST-INTERVAL-SIZE.		C98970
98090	MOVE HIST-TEMP TO HIST-MID-POINT-RPT.		C98970
98100	COMPUTE HIST-PERCENT > HIST-TABLE [HIST-LINE] * 100		C98970
98110	/ HIST-NO-OF-OBS.		C98970
98120	MOVE HIST-PERCENT TO HIST-PERCENT-RPT.		C98970
98130	ADD HIST-PERCENT TO HIST-CUM.		C98970
98140	MOVE HIST-CUM TO HIST-CUM-RPT.		C98970
98150	MOVE HIST-TABLE [HIST-LINE] TO HIST-FREQ-RPT.		C98970
98160	MOVE ZERO TO HIST-INDEX.		C98970
98170	IF HIST-OBS IS NOT EQUAL TO 10: GO TO HIST-CUM-1.		C98970
98180	COMPUTE HIST-INDEX-2 > HIST-TABLE-SCALED [HIST-LINE] < 0.5.		C98970
98190	IF HIST-INDEX-2 IS EQUAL TO ZERO GO TO HIST-PREP-SPACE.		C98970
98200	HIST-PREP-DIST.		C98970
98210	ADD 1 TO HIST-INDEX.		C98970
98220	MOVE :0: TO HIST-POINT [HIST-INDEX].		C98970
98230	IF HIST-INDEX IS LESS THAN HIST-INDEX-2 GO TO HIST-PREP-DIST.		C98970
98240	IF HIST-INDEX IS EQUAL TO 100 THEN GO TO HIST-WRITE.		C98970
98250	HIST-PREP-SPACE.		C98970
98260	ADD 1 TO HIST-INDEX.		C98970
98270	MOVE SPACE TO HIST-POINT [HIST-INDEX].		C98970
98280	IF HIST-INDEX IS LESS THAN 100 THEN GO TO HIST-PREP-SPACE.		C98970
98290	GO TO HIST-WRITE.		C98970
98300	HIST-CUM-1.		C98970
98310	ADD 1 TO HIST-INDEX.		C98970
98320	MOVE SPACE TO HIST-POINT [HIST-INDEX].		C98970
98330	IF HIST-INDEX IS LESS THAN 100 THEN GO TO HIST-CUM-1.		C98970
98339	COMPUTE HIST-INDEX > HIST-CUM < 0.5.		C98970
98339	IF HIST-INDEX IS EQUAL TO ZERO GO TO HIST-WRITE.		C98970
98340	MOVE :0: TO HIST-POINT [HIST-INDEX].		C98970
98400	HIST-WRITE.		C98970
98410	WRITE HIST-REC FROM HIST-LINE-OUT.		C98970
98412	ADD 1 TO HIST-LINE-CNT.		C98970
98414	IF HIST-PAGE-FLAG IS EQUAL TO ZERO GO TO HIST-NO-PAGING.		C98970
98415	IF HIST-LINE-CNT IS EQUAL TO HIST-PAGE-FLAG		C98970

```

98416                                THEN PERFORM HIST-PRINT-TITLE.          C98970
98417 HIST-NO-PAGING.                C98970
98420 IF HIST-LINE IS LESS THAN HIST-NO-OF-INTERVALS THEN GO TO          C98970
98430                                HIST-PREPARE.                          C98970
98440 WRITE HIST-REC FROM HIST-DOT-LINE. C98970
98450 MOVE HIST-SCALE-VALUE TO HIST-SCALE-RPT. C98970
98460 WRITE HIST-REC FROM HIST-SCALE-LINE. C98970
98470 IF HIST-OUT-RANGE-VALUE IS EQUAL TO ZERO GO TO HIST-WRITE-B. C98970
98480 MOVE HIST-OUT-RANGE-VALUE TO HIST-OUT-RANGE-RPT. C98970
98490 WRITE HIST-REC FROM HIST-OUT-RANGE-REC. C98970
98500 HIST-WRITE-B.                  C98970
98510 WRITE HIST-REC FROM HIST-DOT-LINE. C98970
98520 GO TO END-HIST.                C98970
99000 HIST-ERRHOR-1.                 C98970
99010 WRITE HIST-REC FROM HIST-TITLE. C98970
99020 MOVE HIST-ERR-1 TO HIST-TITLE-1. C98970
99030 MOVE HIST-NO-OF-OBS TO HIST-ERR-2. C98970
99040 WRITE HIST-REC FROM HIST-TITLE. C98970
99050 MOVE :1: TO HIST-FLAG.          C98970
99060 GO TO END-HIST.                 C98970
99100 HIST-ERRHOR-2.                 C98970
99110 MOVE HIST-ERR-4 TO HIST-TITLE-1. C98970
99120 MOVE HIST-ERR-5 TO HIST-TITLE-2. C98970
99130 WRITE HIST-REC FROM HIST-TITLE. C98970
99140 MOVE :1: TO HIST-FLAG.          C98970
99150 GO TO END-HIST.                 C98970
99200 HIST-ERR-3.                    C98970
99210 MOVE :1: TO HIST-FLAG.          C98970
99990 END-HIST. EXIT.                C98970
/* PLACE COBOL SOURCE BEFORE
//CHG,TFGIN DD *,SPACE>[CYL,(1,1)]
TFG DT03 11 0202080
5 5

```

1440 CDS

```

*END
/* PLACE TFG DATA BEFORE THIS CARD
//TPR,TU12 DD DISP>[OLD,KEEP],VOL>SER>+F1,UNIT>T+F1
//TPR,TU24 DD DISP>[OLD,KEEP],VOL>SER>+F7,UNIT>T+F7
//TPR,TPHIN DD *,SPACE>[TRK,(1,1)]
T/P TU12 10100202020
T/P TU24 1100130R000
/* PLACE T/P CONTROL CARDS BEFORE THIS CARD

```

T12  
T24

## 6.12 AIRCRAFT INSPECTION HISTORIES

```
//C9897E JOB 01:1 0 WANG 1,PRTY>02,TYPRUN>HOLD
//C9897E EXEC P=66BL,TIME>03,ACCT>035323007
//CHG.TU12 DU DISP>[PASS],UNIT>[T+F1,1,DEFER],DSN>A.9897418, CT12 1
// VOL>SER>[+F1,A+F1,B+F1,C+F1,D+F1,E+F1,F+F1,G+F1,H+F1, CT12 2
// I+F1,J+F1,K+F1,L+F1,M+F1,N+F1,O+F1,P+F1,Q+F1,R+F1,S+F1] T12 3
//CHG.TU22 DU DISP>[PASS],UNIT>[T+F5,1,DEFER],DSN>E.9897444, CT22 1
// VOL>SER>[+F5,A+F5,B+F5,C+F5,D+F5,E+F5,F+F5,G+F5,H+F5, CT22 2
// I+F5,J+F5,K+F5,L+F5,M+F5,N+F5,O+F5,P+F5,Q+F5,R+F5,S+F5] T22 3
//CHG.INPUT DU 0,SPACE>[CTL,1,1]] 1440 CDS
00000 CUMLINE COMPILE 6. WANG. C98970
01000 IDENTIFICATION DIVISION. C98970
01010 PROGRAM-ID. C98970
01020 AUTHOR. A. J. BOWKEM C98970
01030 INSTALLATION. GENERAL DYNAMICS/CONVAIR. C98970
01040 DATE-WRITTEN. 5 MAY 72. C98970
01050 REMARKS. C98970
01060 PLOT FOR SIX WUC V FLT-MRS. C98970
02000 ENVIRONMENT DIVISION. C98970
02010 CONFIGURATION SECTION. C98970
02020 SOURCE-COMPUTER. IBM-360. C98970
02030 OBJECT-COMPUTER. IBM-360. C98970
02100 INPUT-OUTPUT SECTION. C98970
02110 FILE-CONTROL. C98970
02120 SELECT DATA-FILE ASSIGN TO UT-S-TU12 C98970
02130 RESERVE 1 ALTERNATE AREA. C98970
02140 SELECT PLOT-FILE ASSIGN TO UT-S-TU14 C98970
02150 RESERVE 1 ALTERNATE AREA. C98970
02160 SELECT REPORT-FILE ASSIGN TO UT-S-TU22 C98970
02170 RESERVE 1 ALTERNATE AREA. C98970
10000 DATA DIVISION. C98970
10010 FILE SECTION. C98970
11100 FD DATA-FILE C98970
11110 C98970
11120 RECORDING MODE IS F C98970
11130 BLOCK CONTAINS 40 RECORDS C98970
11140 RECORD CONTAINS 70 CHARACTERS C98970
11150 LABEL RECORDS ARE OMITTED C98970
11160 DATA RECORDS ARE DATA-REC. C98970
12400 01 DATA-REC SYNC. C98970
12410 02 FILLER PICTURE X(8). C98970
12420 02 SERIAL-NO PICTURE X(8). C98970
12430 02 WEEK PICTURE 999. C98970
12440 02 WUC PICTURE X(5). C98970
12450 02 FILLER REDEFINES WUC. C98970
12460 03 WUC-1 PICTURE X. C98970
12470 03 FILLER PICTURE X(4). C98970
12480 02 FILLER PICTURE X(27). C98970
12490 02 TURN PICTURE X. C98970
12500 02 FILLER PICTURE X(4). C98970
12510 02 FLT-MRS PICTURE S99999V9. C98970
12520 02 FILLER PICTURE X(11). C98970
21100 FD PLOT-FILE C98970
21110 C98970
21120 RECORDING MODE IS F C98970
21130 BLOCK CONTAINS 20 RECORDS C98970
21140 RECORD CONTAINS 80 CHARACTERS C98970
21150 LABEL RECORDS ARE OMITTED C98970
21160 DATA RECORDS ARE PLOT-FILE-REC. C98970
21170 01 PLOT-FILE-REC SYNC. C98970
21180 02 FILLER PICTURE X(80). C98970
22100 FD REPORT-FILE C98970
22120 RECORDING MODE IS F C98970
22130 BLOCK CONTAINS 15 RECORDS C98970
22140 RECORD CONTAINS 130 CHARACTERS C98970
22150 LABEL RECORDS ARE OMITTED C98970
22160 DATA RECORDS ARE PLOT-REC. C98970
22170 01 PLOT-REC SYNC. C98970
22180 02 FILLER PICTURE X(130). C98970
30000 WORKING-STORAGE SECTION. C98970
30010 77 LINE-LNI SYNC PICTURE 9(4) VALUE ZERO. C98970
30020 77 TOTAL-LINE-LNI SYNC PICTURE 9(7) VALUE ZERO. C98970
30030 77 NO-OF-VALUES COMPUTATIONAL PICTURE S999 VALUE ZERO SYNC. C98970
30040 77 TABLE-POS COMPUTATIONAL PICTURE S999 VALUE ZERO SYNC. C98970
30050 77 NO-LINE COMPUTATIONAL PICTURE S999 VALUE 178 SYNC. C98970
30060 77 TEMP-LOC COMPUTATIONAL PICTURE S9999999 SYNC. C98970
30070 77 LINE-POS COMPUTATIONAL PICTURE S999 VALUE ZERO SYNC. C98970
30080 77 TEMP-VALUE COMPUTATIONAL PICTURE S9999999 SYNC. C98970
30090 77 DEP-INTERVAL COMPUTATIONAL PICTURE S9999 SYNC. C98970
30100 77 MIN-DEP-VALUE COMPUTATIONAL PICTURE S9999999 SYNC. C98970
30110 77 PLOT-FLAG PICTURE X VALUE SPACE SYNC. C98970
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30120	77	MONL	COMPUTATIONAL	PICTURE S99 VALUE -1 SYNC.	C98970
30130	77	CNT	COMPUTATIONAL	PICTURE S999 VALUE ZERO SYNC.	C98970
30140	77	PAGE-NO	COMPUTATIONAL	PICTURE S999 VALUE ZERO SYNC.	C98970
30150	77	MAX-DEP-VALUE	COMPUTATIONAL	PICTURE S9(5)V9 SYNC.	C98970
30160	77	DEP-1	COMPUTATIONAL	PICTURE S9(5)V9 SYNC.	C98970
30170	77	DEP-2	COMPUTATIONAL	PICTURE S9(5)V9 SYNC.	C98970
30180	77	DEP-3	COMPUTATIONAL	PICTURE S9(5)V9 SYNC.	C98970
30190	77	DEP-4	COMPUTATIONAL	PICTURE S9(5)V9 SYNC.	C98970
30200	77	WUC-NO	COMPUTATIONAL	PICTURE S999 SYNC.	C98970
30210	77	CNTA	COMPUTATIONAL	PICTURE S999 SYNC.	C98970
30220	77	CUR-WEEK	COMPUTATIONAL	PICTURE S999 SYNC.	C98970
30230	77	NO-OF-COLS	COMPUTATIONAL	PICTURE S999 SYNC.	C98970
30240	77	TEMP	COMPUTATIONAL SYNC	PICTURE S9(5).	C98970
30250	77	IND-CNT	COMPUTATIONAL SYNC	PICTURE S999 VALUE ZERO.	C98970
31000	01	DEP-TITLE SYNC.			C98970
31010	02	FILLER		PICTURE X(40) VALUE SPACE.	C98970
31020	02	DEPENDENT-TITLE		PICTURE X(80).	C98970
31030	02	FILLER		PICTURE X(10) VALUE 1 #1.	C98970
31100	01	INDEPENDENT-TITLE SYNC.			C98970
31110	02	IND-BLOCK		PICTURE X(80).	C98970
31120	02	FILLER REDEFINES IND-BLOCK.			C98970
31130	03	IND		PICTURE X OCCURS 80 TIMES.	C98970
31200	01	WUC-LIST SYNC.			C98970
31210	02	NO-OF-WUC		PICTURE 9.	C98970
31220	02	FILLER		PICTURE X(8).	C98970
31230	02	WUC-LIST-1 OCCURS 6 TIMES.			C98970
31240	03	WUC-TAB		PICTURE X(5).	C98970
31250	03	FILLER		PICTURE X(5).	C98970
31260	02	WUC-LIST-2 OCCURS 6 TIMES.			C98970
31270	03	WUC-SYMBOL		PICTURE X.	C98970
31280	02	FILLER		PICTURE X(5).	C98970
31300	01	FILLER SYNC.			C98970
31310	02	FILLER-1 OCCURS 200 TIMES.			C98970
31320	03	TAB. OCCURS 7 TIMES	PICTURE S9(5)V9 COMPUTATIONAL.		C98970
31400	01	PLOT-TITLE SYNC.			C98970
31410	02	FILLER		PICTURE X(22) VALUE	C98970
31420	01	AIRCRAFT NUMBER 1.			C98970
31430	02	CUR-S-N		PICTURE X(8) VALUE SPACE.	C98970
31440	02	FILLER		PICTURE X(43) VALUE SPACE.	C98970
31450	02	FILLER		PICTURE X(4) VALUE IPAGE1.	C98970
31460	02	PAGE-NO-RPT		PICTURE 29.	C98970
31470	02	FILLER		PICTURE X VALUE 1#1.	C98970
31500	01	WUC-DATA SYNC.			C98970
31510	02	FILLER		PICTURE X(10) VALUE SPACE.	C98970
31520	02	FILLER		PICTURE X(119) VALUE SPACE.	C98970
31540	02	FILLER		PICTURE X VALUE 1#1.	C98970
31600	01	DEP-AXIS SYNC.			C98970
31610	02	FILLER		PICTURE X(15) VALUE SPACE.	C98970
31620	02	DEP-MIN-RPT		PICTURE ZZZZ9.	C98970
31630	02	FILLER		PICTURE X(15) VALUE SPACE.	C98970
31640	02	DEP-1-RPT		PICTURE ZZZZ9.	C98970
31650	02	FILLER		PICTURE X(15) VALUE SPACE.	C98970
31660	02	DEP-2-RPT		PICTURE ZZZZ9.	C98970
31670	02	FILLER		PICTURE X(15) VALUE SPACE.	C98970
31680	02	DEP-3-RPT		PICTURE ZZZZ9.	C98970
31690	02	FILLER		PICTURE X(15) VALUE SPACE.	C98970
31700	02	DEP-4-RPT		PICTURE ZZZZ9.	C98970
31710	02	FILLER		PICTURE X(15) VALUE SPACE.	C98970
31720	02	DEP-MAX-RPT		PICTURE ZZZZ9.	C98970
31730	02	FILLER		PICTURE X(10) VALUE	C98970
31740	01	DEP-LINE SYNC.			C98970
31810	02	FILLER		PICTURE X(50) VALUE	C98970
31820	02	FILLER		PICTURE X(50) VALUE	C98970
31830	02	FILLER		PICTURE X(50) VALUE	C98970
31840	02	FILLER		PICTURE X(30) VALUE	C98970
31850	02	FILLER		PICTURE X(30) VALUE	C98970
31860	01	PLOT-LINE SYNC.			C98970
31900	02	FILLER		PICTURE X(8) VALUE SPACE.	C98970
31920	02	IND-OUT		PICTURE X.	C98970
31930	02	FILLER		PICTURE X(5) VALUE SPACE.	C98970
31940	02	WEEK-RPT		PICTURE Z29.	C98970
31950	02	FILLER		PICTURE XXX VALUE 1 11.	C98970
31960	02	OUTPUT-LINE OCCURS 100 TIMES			C98970
31970	02	FILLER		PICTURE X.	C98970
31980	02	FILLER		PICTURE X(10) VALUE	C98970
31990	01	WUC-TITLE-LINE SYNC.			C98970
32000	02	FILLER		PICTURE X(10) VALUE SPACE.	C98970
32010	02	FILLER OCCURS 6 TIMES.			C98970
32030	03	SYMB		PICTURE X.	C98970
32040	03	EOL		PICTURE XXX.	C98970
32050	03	WUCT		PICTURE X(5).	C98970
32060	03	BLANK-SPACE		PICTURE X.	C98970
32070	02	FILLER		PICTURE X(89) VALUE SPACE.	C98970
32080	02	FILLER		PICTURE X VALUE 1#1.	C98970



33000	01	REPORT-ID SYNC.		C98970
33010	02	FILLER	PICTURE X(50) VALUE	C98970
33020		:89897C60 TF7919-01 142-8 1	1/2	C98970
33030	02	FILLER	PICTURE X(50) VALUE SPACE.	C98970
33040	02	FILLER	PICTURE X(30) VALUE	C98970
33050		:	SI.	C98970
50000		PROCEDURE DIVISION.		C98970
50010		OPEN INPUT DATA-FILE, PLOT-FILE,		C98970
50020		OUTPUT	REPORT-FILE.	C98970
50040		MOVE 200 TO NO-OF-WEEKS.		C98970
50050		PERFORM READ-PLOT-DATA THRU END-PR.		C98970
50060		ADD NO-OF-WUC, 1 GIVING NO-OF-COLS.		C98970
50070		WRITE PLOT-REC FROM REPORT-ID.		C98970
50100		READ-DATA-FILE.		C98970
50110		READ DATA-FILE.		C98970
50120		AT END GO TO CLOSE-FILES.		C98970
50130		IF IDENT IS NOT EQUAL TO 131 GO TO READ-DATA-FILE.		C98970
50140		IF WUC-1 IS NOT EQUAL TO 101 GO TO READ-DATA-FILE.		C98970
50200		MOVE ZERO TO WUC-NO.		C98970
50210		VALIDATE-WUC.		C98970
50220		ADD 1 TO WUC-NO		C98970
50230		IF WUC IS EQUAL TO WUC-TAB [WUC-NO] GO TO CHECK-S-N.		C98970
50240		IF WUC-NO IS LESS THAN NO-OF-WUC, GO TO VALIDATE-WUC.		C98970
50250		GO TO READ-DATA-FILE.		C98970
50300		CHECK-S-N.		C98970
50310		IF SERIAL-NO IS EQUAL TO CUR-S-N GO TO ADD-DATA.		C98970
50320		IF CUR-S-N IS EQUAL TO SPACE GO TO FIRST-S-N.		C98970
50330		PERFORM PLOT-DATA THRU END-PD.		C98970
50340		FIRST-S-N.		C98970
50350		MOVE SERIAL-NO TO CUR-S-N.		C98970
50360		MOVE ZERO TO CNT.		C98970
50370		ZERO-TABLE-1.		C98970
50380		ADD 1 TO CNT.		C98970
50390		MOVE ZERO TO CNTA.		C98970
50400		ZERO-TABLE-2.		C98970
50410		ADD 1 TO CNTA.		C98970
50420		MOVE MONE TO TABL [CNT, CNTA].		C98970
50430		IF CNTA IS LESS THAN 7	GO TO ZERO-TABLE-2.	C98970
50440		IF CNT IS LESS THAN NO-OF-WEEKS, GO TO ZERO-TABLE-1.		C98970
50450		MOVE WEEK TO CUR-WEEK.		C98970
50460		MOVE 1 TO TABLE-POS.		C98970
50465		MOVE 1 TO NO-OF-WEEKS.		C98970
50470		MOVE WEEK TO TABL 11, 73.	GO TO ADD-LINE.	C98970
50500		ADD-DATA.		C98970
50510		IF WEEK IS EQUAL TO CUR-WEEK GO TO ADD-LINE.		C98970
50520		ADD-DATA-1.		C98970
50530		ADD 1 TO TABLE-POS.		C98970
50540		ADD 1 TO CUR-WEEK.		C98970
50545		ADD 1 TO NO-OF-WEEKS.		C98970
50550		MOVE CUR-WEEK TO TABL [TABLE-POS, 73].		C98970
50560		GO TO ADD-DATA.		C98970
50700		ADD-LINE.		C98970
50710		MOVE FLI-HPS TO TABL [TABLE-POS, WUC-NO].		C98970
50720		GO TO READ-DATA-FILE.		C98970
50800		READ-PLOT-DATA.		C98970
50810		READ PLOT-FILE INTO DEPENDENT-TITLE, AT END GO TO END-PR.		C98970
50820		READ PLOT-FILE INTO INDEPEND-TITLE, AT END GO TO END-PR.		C98970
50830		READ PLOT-FILE INTO WUC-LIST, AT END GO TO END-PR.		C98970
50840		PERFORM PREP-TITLES THRU END-P7.		C98970
50890		END-PR, EXIT.		C98970
51000		PLOT-DATA.		C98970
51010		MOVE ZERO TO PAGE-NO.		C98970
51020		MOVE 9999 TO MIN-DEP-VALUE.		C98970
51030		MOVE ZERO TO CNT.		C98970
51040		FIND-MIN.		C98970
51050		ADD 1 TO CNT.		C98970
51055		IF TABL [1, CNT] IS EQUAL TO MONE GO TO F-M-A.		C98970
51060		IF TABL [1, CNT] IS LESS THAN MIN-DEP-VALUE, MOVE		C98970
51070		TABL [1, CNT] TO MIN-DEP-VALUE.		C98970
51075		F-M-A.		C98970
51080		IF CNT IS LESS THAN NO-OF-COLS GO TO FIND-MIN.		C98970
51100		MOVE ZERO TO MAX-DEP-VALUE.		C98970
51110		MOVE ZERO TO CNT.		C98970
51120		FIND-MAX.		C98970
51130		ADD 1 TO CNT.		C98970
51140		IF TABL [NO-OF-WEEKS, CNT] IS GREATER THAN MAX-DEP-VALUE,		C98970
51150		MOVE TABL [NO-OF-WEEKS, CNT] TO MAX-DEP-VALUE.		C98970
51160		IF CNT IS LESS THAN NO-OF-COLS GO TO FIND-MAX.		C98970
51200		MOVE MIN-DEP-VALUE TO TEMP.		C98970
51205		COMPUTE TEMP	> TEMP / 100 * 100.	C98970
51206		MOVE TEMP TO MIN-DEP-VALUE.		C98970
51210		MOVE MAX-DEP-VALUE TO TEMP.		C98970
51215		COMPUTE TEMP	> [TEMP < 100] / 100 * 100.	C98970
51216		MOVE TEMP TO MAX-DEP-VALUE.		C98970
51220		COMPUTE DEP-INTERVAL	> [MAX-DEP-VALUE - MIN-DEP-VALUE]	C98970



51230	COMPUTE DEP-1 > MIN-DEP-VALUE < (DEP-INTERVAL * 20).	100.	C98970
51240	COMPUTE DEP-2 > MIN-DEP-VALUE < (DEP-INTERVAL * 40).		C98970
51250	COMPUTE DEP-3 > MIN-DEP-VALUE < (DEP-INTERVAL * 60).		C98970
51260	COMPUTE DEP-4 > MIN-DEP-VALUE < (DEP-INTERVAL * 80).		C98970
51270	MOVE MIN-DEP-VALUE TO DEP-MIN-RPT.		C98970
51300	MOVE DEP-1 TO DEP-1-RPT.		C98970
51310	MOVE DEP-2 TO DEP-2-RPT.		C98970
51320	MOVE DEP-3 TO DEP-3-RPT.		C98970
51330	MOVE DEP-4 TO DEP-4-RPT.		C98970
51340	MOVE MAX-DEP-VALUE TO DEP-MAX-RPT.		C98970
51350	WRITE PLOT-TITLE.		C98970
51400	ADD 1 TO PAGE-NO.		C98970
51410	MOVE PAGE-NO TO PAGE-NO-RPT.		C98970
51420	WRITE PLOT-REC FROM PLOT-TITLE.		C98970
51430	WRITE PLOT-REC FROM WUC-TITLE-LINE.		C98970
51440	WRITE PLOT-REC FROM DEP-TITLE.		C98970
51450	WRITE PLOT-REC FROM DEP-AXIS.		C98970
51460	WRITE PLOT-REC FROM DEP-LINE.		C98970
51470	MOVE 5 TO LINE-CNT.		C98970
51472	ADD 5 TO TOTAL-LINE-CNT.		C98970
51474	MOVE ZERO TO IND-CNT.		C98970
51476	END-WPT.		C98970
51480	MOVE ZERO TO TABLE-POS.		C98970
51490	CLEAR-OUTPUT-BLOCK.		C98970
51500	MOVE ZERO TO CNT.		C98970
51510	COB.		C98970
51520	ADD 1 TO CNT.		C98970
51530	MOVE SPACE TO OUTPUT-LINE (CNT).		C98970
51540	IF CNT IS LESS THAN 100 GO TO COB.		C98970
51550	ADD 1 TO TABLE-POS.		C98970
51600	MOVE TABL [TABLE-POS, 7] TO WEEK-RPT.		C98970
51610	ADD 1 TO IND-CNT, MOVE IND [IND-CNT] TO IND-OUT.		C98970
51620	IF IND-CNT IS GREATER THAN 79 MOVE ZERO TO IND-CNT.		C98970
51622	MOVE ZERO TO CNT.		C98970
51630	PREP-PLOT.		C98970
51640	ADD 1 TO CNT.		C98970
51650	MOVE TABL [TABLE-POS, CNT] TO TEMP-LOC.		C98970
51660	IF TEMP-LOC IS NOT EQUAL TO NONE GO TO FILL-LN.		C98970
51670	IF CNT IS LESS THAN NO-OF-WUC GO TO PREP-PLOT.		C98970
51680	GO TO WRITE-LINE.		C98970
51690	FILL-LN.		C98970
51700	MOVE ZERO TO LINE-POS.		C98970
51740	MOVE MIN-DEP-VALUE TO TEMP-VALUE.		C98970
51750	FIND-LINE-POS.		C98970
51800	ADD 1 TO LINE-POS.		C98970
51810	ADD DEP-INTERVAL TO TEMP-VALUE.		C98970
51820	IF TEMP-LOC NOT GREATER THAN TEMP-VALUE GO TO FILL-SPACE.		C98970
51830	IF LINE-POS IS LESS THAN 100 GO TO FIND-LINE-POS.		C98970
51840	NOTE THRU HERE IS AN ERROR.		C98970
51850	DISPLAY : ERROR FIND-LINE-POS : TEMP-LOC UPON CONSOLE.		C98970
51860	GO TO CFILES.		C98970
51870	FILL-SPACE.		C98970
51900	IF OUTPUT-LINE [LINE-POS] IS NOT EQUAL TO SPACE MOVE 101 TO		C98970
51904	OUTPUT-LINE [LINE-POS], GO TO WRITE-LINE.		C98970
51905	MOVE WUC-SYMBOL [CNT] TO OUTPUT-LINE [LINE-POS].		C98970
51910	GO TO PREP-PLOT.		C98970
51920	WRITE-LINE.		C98970
52000	IF LINE-CNT IS GREATER THAN NO-LINE, WRITE PLOT-REC FROM		C98970
52010	DEP-LINE ADD 1 TO TOTAL-LINE-CNT, PERFORM WRITE-PLOT-TITLE.		C98970
52030	WRITE PLOT-REC FROM PLOT-LINE.		C98970
52040	ADD 1 TO LINE-CNT.		C98970
52050	ADD 1 TO TOTAL-LINE-CNT.		C98970
52060	IF TABLE-POS IS LESS THAN NO-OF-WEEKS GO TO		C98970
52070	CLEAR-OUTPUT-BLOCK.		C98970
52090	END-PD, EXIT.		C98970
60000	CLOSE-FILES.		C98970
60010	PERFORM PLOT-DATA THRU END-PD.		C98970
60100	CFILES.		C98970
60110	DISPLAY : TOTAL LINE COUNT > I TOTAL-LINE-CNT UPON CONSOLE.		C98970
60170	CLOSE DATA-FILE, PLOT-FILE, REPORT-FILE WITH LOCK.		C98970
60180	DISPLAY : END OF JOB 9897 : UPON CONSOLE.		C98970
60190	GOBACK.		C98970
61100	PREP-TITLES.		C98970
61110	MOVE ZERO TO CNT.		C98970

61120	PTA,					C98970
61130	ADD 1 TO CNT,					C98970
61140	MOVE WUC-SYMBOL [CNT] TO SYMB [CNT],					C98970
61150	MOVE WUC-FAB [CNT] TO WUCT [CNT],					C98970
61160	MOVE SPACE TO EQU [CNT],					C98970
61170	MOVE SPACE TO BLANK-SPACE [CNT],					C98970
61180	IF CNT IS LESS THAN 6	GO TO PTA.				C98970
61200	MOVE ZERG TO CNT,					C98970
61210	PTB,					C98970
61220	ADD 1 TO CNT,					C98970
61230	MOVE : > : TO EQU [CNT],					C98970
61240	IF CNT IS LESS THAN NO-OF-WUC	GO TO PTB.				C98970
61290	END-PT. EXIT.					C98970
/*	PLACE COBOL SOURCE BEFORE THIS CARD					
//CHG.TFG1N	DD *.SPACE>[CYL,[1,1]]					1440 CDS
TFG TU14	11 020'080					

					WEEKS.	FLIGHT HOURS.
5	03300	03310	03320	03330	03400	12345
*END						
/*	PLACE TFG DATA BEFORE THIS CARD					
//TPR.TU12	DD U1SP>[OLD,KEEP],VOL>SER>+F1,UNIT>T+F1					T12
//TPR.TU22	DD J1SP>[OLD,KEEP],VOL>SER>+F5,UNIT>T+F5					T22
//TPR.TPR1N	DD *.SPACE>[TRK,[1,1]]					
T/P TU12	10100702070					
T/P TU14	10100802080					
T/P TU22	19981307000					
/*	PLACE T/P CONTROL CARDS BEFORE THIS CARD					

### 6.13 EFFECTIVENESS MODEL.

[illegible]

C READ INPUT DATA	740
1 READ(5,100) HEAD	750
IF (HEAD(1)-E0F9) 3,2,3	760
2 CALL EOJMSG	202
CALL EXIT	705
3 READ(5,102) EFHW,SFHW,ESOW,SSOW,ELDW,SLDW,AIES	780
READ(5,102) R,EMHP,SMHP,EMHB,SMHB	790
READ(5,101) I,K1,NSCT,NSPT,KSET	800
READ(5,102) (DELI(I),I=1,N1)	810
READ(5,101) (NFOL(I),I=1,NSCT)	820
DO 10 I=1,NSCT	830
N=NFOL(I)	840
READ(5,101) (NSCH(I,J),J=1,N)	850
READ(5,104) (EMHI(I,J),SMHI(I,J),AN(I,J),BN(I,J),SNI(I,J),J=1,N)	860
C READ WUC SET DATA DEPENDENT ON TIME	870
READ(5,103) (ANU(I,K),BNU(I,K),ANAB(I,K),BNAB(I,K),K=1,KSET)	880
READ(5,102) (DIK(I,K),K=1,KSET)	890
READ(5,102) (UMAS(I,K),K=1,KSET)	900
10 CONTINUE	910
C READ WUC SET DATA INDEPENDENT OF TIME	920
READ(5,104) (EMHU(K),SMHU(K),ENU(K),SNU(K),ENWK(K),K=1,KSET)	930
C READ SPECIAL INSPECTION DATA	940
READ(5,105) (EMHS(I),SMHS(I),ENS(I),SNS(I),DISP(I),SISP(I),KIS(I),	950
I=1,NSPT)	960
WRITE(6,300) HEAD	970
WRITE(6,301) EFHW,SFHW	980
WRITE(6,302) ESOW,SSOW	990
WRITE(6,303) ELDW,SLDW	1000
WRITE(6,304) EMHP,SMHP	1010
WRITE(6,305) EMHB,SMHB	1020
WRITE(6,306) R	1030
WRITE(6,307) AIES	1040
WRITE(6,308)	1050
DO 15 I=1,NSCT	1060
N=NFOL(I)	1070
WRITE(6,309) (I,J, EMHI(I,J),SMHI(I,J),AN(I,J),BN(I,J),SNI(I,J),	1080
NSCH(I,J),J=1,N)	1090
15 CONTINUE	1100
WRITE(6,310)	1110
WRITE(6,311) (I,K, ANU(I,K),BNU(I,K),UMAS(I,K),ANAB(I,K),	1120
BNAB(I,K),K=1,KSET),I=1,NSCT)	1130
WRITE(6,312)	1140
WRITE(6,313) (K,EMHU(K),SMHU(K),ENU(K),SNU(K),ENWK(K),K=1,KSET)	1150
WRITE(6,314)	1160
WRITE(6,315) (J,EMHS(J),SMHS(J),ENS(J),SNS(J),DISP(J),SISP(J),	1170
1 KIS(J),J=1,NSPT)	1180
WRITE(6,400)	1190
C PERFORM CALCULATIONS	1200
DO 16 (INT=1,N1)	1210
CALL PFPF	1220
CALL SPIS	1230
CALL INVL	1240
CALL RPD	1250
C PRINT INTERVAL RESULTS	1260
WRITE(6,401) DELI(INT)	1270
WRITE(6,402)	1280
WRITE(6,403) EWKD,SWKD	1290
WRITE(6,404) EPH,SPFH	1300
WRITE(6,405) EPH,SPFH	1310
WRITE(6,406) EMSD,SMSD	1320
WRITE(6,407) EMSD,SMSD	1330
WRITE(6,408)	1340
WRITE(6,409) (I,UMAC(I),I=1,NSCT)	1350
WRITE(6,410)	1360
WRITE(6,411) (I,LACM(I),SACM(I),I=1,NSCT)	1370
WRITE(6,412)	1380
WRITE(6,413) (I,LACN(I),SACN(I),I=1,NSCT)	1390
WRITE(6,408)	1400
DO 516 I=1,NSCT	1410
N=NFOL(I)	1420
DO 515 J=1,N	1430
WRITE(6,409) I,J,EMHU(I,J),SMHU(I,J)	1440
515 CONTINUE	1450
516 CONTINUE	1460
WRITE(6,410)	1470
DO 518 I=1,NSCT	1480
N=NFOL(I)	1490
DO 517 J=1,N	1500
WRITE(6,409) I,J,END(I,J),SND(I,J)	1510
517 CONTINUE	1520
518 CONTINUE	1530
WRITE(6,411)	1540
DO 520 I=1,NSCT	1550
N=NFOL(I)	1560
DO 519 J=1,N	1570
WRITE(6,412) I,J,FED(I,J),SED(I,J)	1580
519 CONTINUE	1590
520 CONTINUE	1600
WRITE(6,413)	1610
WRITE(6,419) (I,DO(I),I=1,NSCT)	1620
16 CONTINUE	1630
	1640

[illegible]

	SUBROUTINE PEPF	2500
C	THIS ROUTINE CALCULATES THE TOTAL NUMBER OF PREFLIGHT AND BASIC	2510
C	POSTFLIGHT MAINTENANCE FOR DELI.	2520
C	THE NUMBER OF WEEKS IN THE MAINTENANCE PROGRAM IS ALSO DETERMINED	2530
	COMMON IINT,	2540
C	INPUT DATA	2550
	1DEL(110),K1,NSCT,NFOL(3),NSCH(3,3),NSPT,DISP(60),SISP(60),K15(60),	2560
	2H,EMH(13,3),SMHT(3,3),AN(3,3),BN(3,3),SN1(3,3),EMHS(60),SMHS(60),	2570
	3LTIS(60),SNS(60),EMHP,SMHP,EMHB,SMHB,N1,KSET,ANU(3,60),BNU(3,60),	2580
	4LMHU(60),SMHU(60),ENU(60),SNU(60),ANAB(3,60),RNAB(3,60),ENWK(60),	2590
	5LFHW,SFHW,ESOW,SSOW,ELUW,SLDW,ATES,D1K(3,60),UMAS(3,60),	2600
C	DATA GENERATED BY PEPF	2610
	6WKU(150),PWKU(150),EWKU,SWKU,EWKM,SWKM,EPFH,SPFH,EBPH,SAPH,NINT,	2620
	6X(61),FX(61),EFHU,VFHO,	2630
C	DATA GENERATED BY SPIS	2640
	7EMSU,SMSU,EMSD,SNSD,	2650
C	DATA GENERATED BY INVL	2660
	8EMHU(3,3),SMHU(3,3),ENU(3,3),SND(3,3),EED(3,3),SED(3,3),OD(3),	2670
	8UMAC(3),LACM(3),SACM(3),EACN(3),SACN(3),ACNS,	2680
C	DATA GENERATED BY MPD	2690
	9EMHY(10),SMHY(10),ENHR(10),SNHR(10),EEMP(10),SEMP(10),DMP(10)	2700
	9,EMHF(10),SMHF(10)	2710
	DIMENSION, SUU(100),PSOU(100),KF(2),KS(2),PP(2,2)	2720
C	STONE CUMULATIVE NORMAL DISTRIBUTION	2730
	1 X(1)=-3.0	2740
	DO 10 I=2,61	2750
	X(I)=X(I-1)+0.1	2760
10	CONTINUE	2770
	FX(31)=0.5	2780
	FX(32)=0.5390	2790
	FX(33)=0.5793	2800
	FX(34)=0.6179	2810
	FX(35)=0.6554	2820
	FX(36)=0.6915	2830
	FX(37)=0.7257	2840
	FX(38)=0.7580	2850
	FX(39)=0.7881	2860
	FX(40)=0.8159	2870
	FX(41)=0.8413	2880
	FX(42)=0.8643	2890
	FX(43)=0.8849	2900
	FX(44)=0.9032	2910
	FX(45)=0.9192	2920
	FX(46)=0.9332	2930
	FX(47)=0.9452	2940
	FX(48)=0.9554	2950
	FX(49)=0.9641	2960
	FX(50)=0.9713	2970
	FX(51)=0.9772	2980
	FX(52)=0.9821	2990
	FX(53)=0.9861	3000
	FX(54)=0.9893	3010
	FX(55)=0.9916	3020
	FX(56)=0.9936	3030
	FX(57)=0.9953	3040
	FX(58)=0.9965	3050
	FX(59)=0.9974	3060
	FX(60)=0.9981	3070
	FX(61)=0.9987	3080
	DO 20 I=1,30	3090
	FX(I)=1.0-FX(62-I)	3100
20	CONTINUE	3110
	IF(K1-2) 100,200,30	3120
	30 IF(K1-4) 300,400,1000	3130
C	INTERVAL IS IN WEEKS	3140
100	ESOU=DEL(11)INT+ESOW	3150
	SSOU=DEL(11)INT+SSOW	3160
	EWKU=DEL(11)INT	3170
	SWKU=0.0	3180
	DO 110 I=1,149	3190
	WKU(I)=I	3200
	PWKU(I)=0.0	3210
110	CONTINUE	3220
	WKU(150)=FWKU	3230
	PWKU(150)=1.0	3240
	GO TO 600	3250
C	INTERVAL IS IN FLIGHT HOURS	3260
200	IF(SFHW) 220,220,201	3270
201	KL=EFHW/(SFHW+SFHW)	3280
	(K=EFHW+KL	3290
205	KL=KK	3300
	KK=KL+1	3310
	C=DEL(11)INT	3320
	DO 210 I=1,150	3330
	WKU(I)=I	3340
	UC=C/WKU(I)	3350
	IF(KK) 200,200,206	3360

206	PP(1,1)=KL*DL*EXP(-RL*DC)/WKD(1)	3370
	PL=PP(1,1)*(RL*DC)**(KL-1)	3380
	PH=PL*RL*DC	3390
	KENU=KL-1	3400
	DO 207 J=2,KEND	3410
	PL=PL/J	3420
	PH=PH/J	3430
207	CONTINUE	3440
	PH=PH/KL	3450
	PWKU(1)=PL*(PH-PL)*(HK-KL)	3460
	GO TO 210	3470
208	PWKU(1)=KL*DC*EXP(-RL*DC)/WKD(1)	3480
210	CONTINUE	3490
	GO TO 500	3500
220	PWKU(1)=-101.	3510
	EWKU=DEL(11)/EFHW	3520
	SWKU=0.0	3530
	GO TO 475	3540
C	INTERVAL IS IN SORTIES	3550
300	ESOU=DEL(11)*T	3560
	SSOU=0.0	3570
	IF(SSOU) 320,320,301	3580
301	KL=ESOU/(SSOU*SSOU)	3590
	HK=ESOU*KL	3600
	GO TO 205	3610
320	EWKU=DEL(11)*T/ESOU	3620
	SWKU=0.0	3630
	PWKU(1)=-101.	3640
	GO TO 600	3650
C	INTERVAL IS IN LANDINGS	3660
400	IF(SLLW) 420,420,401	3670
401	HL=ELDW/(SLDW*SLOW)	3680
	HK=ELDW*HL	3690
	GO TO 205	3700
420	EWKU=DEL(11)*T/ELDW	3710
	SWKU=0.0	3720
	PWKU(1)=-101.	3730
475	IF(SSOW) 480,480,490	3740
480	ESOU=ESOW*EWKD	3750
	SSOU=0.0	3760
	GO TO 600	3770
490	KL=ESOU/(SSOU*SSOU)	3780
	HK=ESOU*KL	3790
	KL=HK	3800
	KENU=KL-1	3810
	FAC=(KL/LWKD)	3820
	DO 491 I=1,100	3830
	SOU(1)=4.01	3840
	FAC=FACT*SOU(1)	3850
	IF(KEND) 496,496,491	3860
491	SUM=1.0	3870
	(EKM=1.0	3880
	DO 492 J=1,KEND)	3890
	IF(K=1(RM+AL/J	3900
	SUM=SUM*(FHM	3910
492	CONTINUE	3920
	PL=SUM	3930
	PH=SUN+TLRM*FAC/KL	3940
	TP=PL*(PH-PL)*(RK-KL)	3950
	PSOU(1)=1.-EXP(-FAC)*TP	3960
	GO TO 408	3970
496	PSOU(1)=1.-EXP(-FAC)	3980
498	CONTINUE	3990
	GO TO 550	4000
500	IF(SSOW) 532,532,511	4010
511	HL=ESOU/(SSOU*SSOU)	4020
	HK=ESOU*HL	4030
	KF(1)=RK	4040
	KF(2)=KF(1)+1	4050
	KS(1)=RKSW	4060
	KS(2)=KS(1)+1	4070
	IF(KF(1)) 440,440,442	4080
440	KF(1)=1	4090
	KK=1.	4100
442	IF(KS(1)) 444,444,446	4110
444	KS(1)=1	4120
	KPSW=1.	4130
446	DO 530 I=1,100	4140
	SOU(1)=1.0,0	4150
	(OP=HL*W*SOU(1)	4160
	BOT=KL*DEL(11)*T+TOP	4170
	UEN=(OP/BOT)	4180
	DO 524 LS=1,2	4190
	KFNU=KS(LS)-1	4200
	DO 522 LF=1,2	4210
	KK=KF(LF)	4220
	C=(DEL(11)*T)*HL/BOT)**KK	4230
	SUM=C	4240
	IF(KEND) 520,520,447	4250

6-247



ENSU=0.0	5110
SMSU=0.0	5120
ENSU=0.0	5130
SNSU=0.0	5140
DO 100 I=1,NJP1	5150
IF(NIS(I)-2) IN=20,1000	5160
C 1TH INTERVAL IN WEEKS	5170
10 L1W=DISP(I)	5180
SIW=DISP(I)	5190
GO TO 50	5200
C 1TH INTERVAL IN FLIGHT HOURS	5210
20 IF(SFHW) 400,410,21	5220
21 IF(SISP(I)) 42,42,25	5230
25 RLSP=DISP(I)/(SISP(I)*SISP(I))	5240
KKSP=RLSP*DISP(I)	5250
HLFw=LFHW/(SFHW*SFHW)	5260
KKFw=LFHW*HLFw	5270
KS(I)=KKSP	5280
KS(2)=KS(1)+1	5290
KF(1)=KKFw	5300
KF(2)=KF(1)+1	5310
IF(KF(1)) 26,26,27	5320
26 KF(1)=1	5330
KKFw=1.	5340
27 IF(KS(1)) 28,28,29	5350
28 KS(1)=1	5360
KKSP=1.	5370
29 DO 40 J=1,150	5380
DISW(J)=J	5390
DO 35 JF=1,2	5400
KKFw=KF(JF)+1	5410
DO 34 JS=1,2	5420
KK=KS(JS)	5430
ULF=HLFw*PLSP*J	5440
CL=RLSP*J/ULF)*KK	5450
ULF=HLFw/CL	5460
SUM=CL	5470
IF(KLND) 32,32,30	5480
30 DO 31 JI=1,KLND	5490
CL=CL*ULF*(KK+JI-1)/JI	5500
SUM=SUM+CL	5510
31 CONTINUE	5520
32 PP(JF,JS)=SUM	5530
34 CONTINUE	5540
35 CONTINUE	5550
ULF=KKSP-KS(1)	5560
PL=PP(1,1)+(PP(1,2)-PP(1,1))*DKS	5570
PH=PP(2,1)+(PP(2,2)-PP(2,1))*DKS	5580
PISW(J)=PL+(PH-PL)*(KKFw-KF(1))	5590
40 CONTINUE	5600
GO TO 602	5610
42 HLFw=LFHW/(SFHW*SFHW)	5620
KKFw=LFHW*HLFw	5630
KLFW=KKFw	5640
KKFw=KKFw+1	5650
KLND=KLFW-1	5660
DO 44 J=1,150	5670
DISW(J)=J	5680
IF(KKFw-1.) 45,43,43	5690
43 FAC=KLFW*DISP(I)/J	5700
SUM=1.0	5710
TERM=1.0	5720
DO 44 K=1,KLND	5730
TERM=TERM*FAC/K	5740
SUM=SUM+TERM	5750
44 CONTINUE	5760
PL=LAP*(-FAC)*SUM	5770
SUM=SUM+TERM*FAC/KLFW	5780
PH=LAP*(-FAC)*SUM	5790
PISW(J)=PL+(PH-PL)*(KKFw-KLFW)	5800
DO 10 44	5810
45 PISW(J)=LAP*(-KLFW*DISP(J)/J)	5820
46 CONTINUE	5830
GO TO 602	5840
400 IF(SISP(I)) 410,410,415	5850
410 ELW=DISP(I)/EFHW	5860
SIWK=0.0	5870
GO TO 50	5880
415 RLSP=DISP(I)/(SISP(I)*SISP(I))	5890
KKSP=DISP(I)*RLSP	5900
KLSP=KKSP	5910
KKSP=KLSP+1	5920
KKFw=KLSP-1	5930
DO 420 J=1,150	5940
DISW(J)=J	5950
IF(KKSP-1.) 414,416,416	5960

416	FAC=KLSP*EFHW/J	5970
	SUM=1.0	5980
	TERM=1.0	5990
	DO 410 K=1,KENDU	6000
	TERM=TERM*FAC/K	6010
	SUM=SUM+TERM	6020
418	CONTINUE	6030
	PL=1.-EXP(-FAC)*SUM	6040
	SUM=SUM+(EXP(-FAC)/KLSP	6050
	PH=1.-EXP(-FAC)*SUM	6060
	PISW(J)=PL+(PH-PL)*(HKSP-KLSP)	6070
	GO TO 420	6080
419	PISW(J)=1.-EXP(-KLSP*EFHW/J)	6090
420	CONTINUE	6100
422	NA=150	6110
	CALL MNDV(D1SW,PISW,NA,E1WK,S1WK)	6120
C	CALCULATE NUMBER OF SPECIAL INSPECTIONS PER INTERVAL	6130
C	PNSP(K) IS THE PROBABILITY THAT THE NUMBER OF INSPECTIONS IS	6140
C	,LE. (K-1)	6150
50	IF(S1WK) 200,200,55	6160
55	D1MN=E1WK-3.0*S1WK	6170
	IF(D1MN-5.E-7) 51,52,52	6180
51	D1MN=.001+E1WK	6190
52	NMX=(E1WK+3.*S1WK)/D1MN	6200
	IF(NMX) 100,100,601	6210
601	IF(NMX-99) 54,54,53	6220
53	NMX=99	6230
54	DO 61 J=1,NMX	6240
	PP(1,1)=0.0	6250
	E=J+E1WK	6260
	E1=(J+1)*E1WK	6270
	S=SUM(FLOAT(J))*S1WK	6280
	S1=SUM(FLOAT(J+1))*S1WK	6290
	IF(PWKD(1)+10.) 155,56,56	6300
155	CALL NML(FWKD,E,S,P)	6310
	CALL NML(FWKD,E1,S1,P1)	6320
	PP(1,1)=PP(1,1)+(P-P1)	6330
	GO TO 160	6340
56	DO 60 K=1,150	6350
	IF(PWKD(K)-1.E-6) 60,58,58	6360
58	C=WKD(K)	6370
	CALL NML(C,E,S,P)	6380
	CALL NML(C,E1,S1,P1)	6390
	PP(1,1)=PP(1,1)+(P-P1)*PWKD(K)	6400
60	CONTINUE	6410
160	PNSP(J+1)=PP(1,1)	6420
61	CONTINUE	6430
	IF(PWKD(1)+10.) 170,165,165	6440
165	PP(1,1)=0.0	6450
	DO 63 K=1,150	6460
	IF(PWKD(K)-1.E-6) 63,63,63	6470
63	C=WKD(K)	6480
	CALL NML(C,E1WK,S1WK,P)	6490
	PP(1,1)=PP(1,1)+(1.-P)*PWKD(K)	6500
65	CONTINUE	6510
	PNSP(1)=PP(1,1)	6520
	GO TO 300	6530
170	CALL NML(FWKD,E1WK,S1WK,P)	6540
	PNSP(1)=1.-P	6550
	GO TO 300	6560
200	IF(PWKD(1)+10.) 210,220,220	6570
210	NMX=E1WK/E1WK	6580
	PNSP(1)=101.	6590
	GO TO 300	6600
220	NMX=WKD(150)/E1WK	6610
	IF(NMX-99) 222,222,221	6620
221	NMX=99	6630
222	DO 230 J=1,NMX	6640
	PNSP(J+1)=0.0	6650
	DO 240 K=1,150	6660
	IF(PWKD(K)-1.E-6) 240,226,226	6670
226	C=WKD(K)	6680
	IF(C-(J-1)*E1WK) 240,230,230	6690
230	IF(C-J*E1WK) 235,240,240	6700
235	PNSP(J+1)=PNSP(J+1)+PWKD(K)	6710
240	CONTINUE	6720
250	CONTINUE	6730
	PNSP(1)=0.0	6740
	DO 260 K=1,150	6750
	IF(PWKD(K)-1.E-6) 260,253,253	6760
253	C=WKD(K)	6770
	IF(C-E1WK) 255,260,260	6780
255	PNSP(1)=PNSP(1)+PWKD(K)	6790
260	CONTINUE	6800
300	IF(PNSP(1)+10.) 308,308,301	6810
301	NMX=NMX+2	6820
	NMX=NMX	6830
	DO 304 K=1,NMX	6840

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19	EMH=EMHU(K)*UMA	7710
	SMH=SQRT(UMA*(SMHU(K)*SMHU(K)+EMHU(K)*EMHU(K)))	7720
	EN=ENU(K)*UMA	7730
	SN=SUPT(UMA*(SNU(K)*SNU(K)+ENU(K)*ENU(K)))	7740
	LACH(1)=LACH(1)+EMH	7750
	SACH(1)=SACH(1)+SMH	7760
	EACH(1)=EACH(1)+EN	7770
	SACH(1)=SACH(1)+SN*SN	7780
	UMAC(1)=UMA+UMAC(1)	7790
20	CONTINUE	7800
	SACH(1)=SQRT(SACH(1))	7810
	SACH(1)=SQRT(SACH(1))	7820
	APN=0.0	7830
C	CALCULATE DEPENDABILITY PER INTERVAL	7840
	DO 30 K=1,KSET	7850
	A=AHAB(I,K)	7860
	IF(A) 22,22,23	7870
22	ABN=ABN+0.5*BNAB(I,K)*DELI(11INT)*D1K(1,K)	7880
	GO TO 30	7890
23	AB2=A+BNAB(I,K)*DELI(11INT)*D1K(1,K)	7900
	(F(AB2) 24,24,26	7910
24	ABN=ABN+A*0.5	7920
	GO TO 30	7930
26	ABN=ABN+A*0.5*BNAB(I,K)*DELI(11INT)*D1K(1,K)	7940
30	CONINUE	7950
	FS=ATIS+ABN	7960
	UD(I)=EXP(-FS)	7970
C	CALCULATE TOTAL MANHOURS AND NOR PER INTERVAL	7980
	NM=NFOL(1)	7990
	DO 499 J=1,TIM	8000
	EMHU(I,J)=EMH(1(I,J)+EPFH+EBPH+EACH(1)+EMSD	8010
	SMHU(I,J)=SQRT(SMH(1(I,J)+SPFH+SPFH+SBPH+SRPH+SACH(1)+	8020
	1SACH(1)+SMSD+SMSD)	8030
	ENI=EN(1(I,J)+BN(I,J)*DELI(11INT)	8040
	IF(LN(I) 28,29,29	8050
28	ENI=0.0	8060
29	ENI=ENI+EACH(1)+EMSD	8070
	SNM=SMH(1(I,J)+SN(1(I,J)+SACH(1)+SACH(1)+SNSD+SNSD	8080
	END(1,J)=ENI+ACNS*(ENI+ENI/168.)	8090
	SZ=SNM*2+ACNS+ACNS*(SNM+SNM/28224.)	8100
	SHU(I,J)=SQRT(SZ)	8110
C	CALCULATE MEAN AND STD DEV OF TOTAL HOURS PER INTERVAL	8120
164	ECT=168.*ENI+ENI*(1.+ACNS/168.)	8130
	S=SHU(I,J)	8140
	SCT=SQRT(28224.*SNM+SNM+SNM*(1.+ACNS+ACNS/28224.))	8150
C	CALCULATE AVAILABILITY DISTRIBUTION	8160
	DTAV=0.05263158	8170
	NAV=20	8180
	TAV(1)=0.0	8190
	DO 170 L=2,NAV	8200
	TAV(L)=TAV(L-1)+DTAV	8210
170	CONTINUE	8220
	(F(SND(1,J)) 500,500,526	8230
500	(F(SCT) 501,501,510	8240
501	DO 506 L=1,NAV	8250
	IF(ECT*(1.-TAV(L))-END(1,J)) 503,504,504	8260
503	PAV(L)=1.0	8270
	GO TO 506	8280
504	PAV(L)=0.0	8290
506	CONTINUE	8300
	GO TO 600	8310
510	KLCD=ECT/(SCT+SCT)	8320
	KKCD=KLCD*251	8330
	KLCD=KKCD	8340
	FAC=KLCD*END(1,J)	8350
	DO 520 L=1,NAV	8360
	FAC=FAC/(1.-TAV(L))	8370
	IF(KKCD-1.) 517,514,514	8380
514	SNM=1.0	8390
	TERM=1.0	8400
	DO 512 L=1,KLCD	8410
	TERM=TERM+FAC/L1	8420
	SUM=SUM+TERM	8430
512	CONTINUE	8440
	PL=1.0-EXP(-FAC)*SUM	8450
	SUM=SUM+TERM+FAC/KLCD	8460
	PH=1.0-EXP(-FAC)*SUM	8470
	PAV(L)=PL*(PH-PL)*(KKCD-KLCD)	8480
	GO TO 520	8490
517	PAV(L)=1.-EXP(-FAC)	8500
520	CONTINUE	8510
	GO TO 600	8520
526	(F(SCT) 528,528,540	8530
528	RLNU=END(1,J)/(SND(1,J)+SND(1,J))	8540
	KKNU=KLCD*END(1,J)	8550
	RLNU=KKNU	

	KENDU=KLND-1	8560
	FACI=RLND+LC	8570
	DO 536 L=1,NAV	8580
	FAC=FAC+(1.-TAV(L))	8590
	IF(KEND) 534,530,530	8600
530	SUM=1.0	8610
	TERM=1.0	8620
	DO 532 L1=1,KLND	8630
	TERM=TERM+FAC/L1	8640
	SUM=SUM+TERM	8650
532	CONTINUE	8660
	PL=SUM*EXP(-FAC)	8670
	SUM=SUM+TERM*FAC/KLND	8680
	PH=SUM*EXP(-FAC)	8690
	PAV(L)=PL*(PH-PL)*(KKN-KLND)	8700
	GO TO 536	8710
534	PAV(L)=EXP(-FAC)	8720
536	CONTINUE	8730
	GO TO 600	8740
540	NLCU=ECT/(SC)*SCTI	8750
	NKCUE=ECT*PLCU	8760
	KLND=END(I,J)/(SND(I,J)*SND(I,J))	8770
	NKNU=END(I,J)*RLND	8780
	NN(1)=NKN	8790
	NN(2)=NN(1)+1	8800
	KC(1)=RKCD	8810
	KC(2)=KC(1)+1	8820
	IF(NN(1)) 541,541,542	8830
541	NN(1)=1	8840
	NKNU=1.	8850
542	IF(KC(1)) 543,543,544	8860
543	KC(1)=1	8870
	NKCU=1.	8880
544	DO 560 L=1,NAV	8890
	TOP=NLCU+(1.-TAV(L))	8900
	DETC=TOP/(TOP+NLCU)	8910
	DO 553 LN=1,C	8920
	KENDU=KN(LN)-1	8930
	DO 552 LC=1,C	8940
	KK=KC(LC)	8950
	C=(NLCU/(TOP+NLCU))*KK	8960
	SUM=C	8970
	IF(KLND) 550,550,546	8980
546	DO 548 LI=1,NEND	8990
	C=C+EN*(KK+LI-1)/LI	9000
	SUM=SUM+C	9010
548	CONTINUE	9020
550	PP(LN,LC)=SUM	9030
552	CONTINUE	9040
553	CONTINUE	9050
	UKC=NKCD-KC(1)	9060
	PL=PP(1,1)+(PP(1,2)-PP(1,1))*DKC	9070
	PH=PP(2,1)+(PP(2,2)-PP(2,1))*DKC	9080
	PAV(L)=PL*(PH-PL)*(KKN-KN(1))	9090
560	CONTINUE	9100
C	CALCULATE EFFECTIVENESS MEAN AND STD. DEV.	9110
600	DO 40 L=1,NAV	9120
	TAV(L)=TAV(L)+UN(I)	9130
40	CONTINUE	9140
	CALL OMNOUV(TAV,PAV,NAV,EED(I,J),SED(I,J))	9150
890	CONTINUE	9160
900	CONTINUE	9170
	RETURN	9180
C C		9190
C	THE VARIABLES TO BE USED IN OTHER ROUTINES ARE	9200
C	EMHU(I,J),SMHD(I,J) MEAN AND STD DEV OF MANHOURS PER INTERVAL	9210
C	EMU(I,J),SND(I,J) MEAN AND STD DEV OF NOR PER INTERVAL	9220
C	EUI(I,J),SED(I,J) MEAN AND STD DEV OF EFFECTIVENESS PER INTER	9230
C	DII(I) DEPENDABILITY PER INTERVAL	9240
C C		9250
C	END	9260
	SUBROUTINE MVD	9270
C	CALCULATE MAINTENANCE PROGRAM MANHOURS, NOR, DEPENDABILITY, AND	9280
C	EFFECTIVENESS - THE OUTPUT OF THE MODEL	9290
	COMMON INT,	9300
C	INPUT DATA	9310
	IUEL(10),K1,NSET,NFOL(3),NSCH(3,3),NSPT,DISP(60),SISP(60),KIS(60),	9320
	ZH,EMHI(3,3),SMHI(3,3),ANI(3,3),RNI(3,3),SNI(3,3),EMHS(60),SMHS(60),	9330
	JCNLS(60),SNS(60),EMHP,SMHP,EMHB,SMHB,N1,KSET,ANU(3,60),BNU(3,60),	9340
	LEMHI(60),SMHI(60),ENU(60),SNU(60),ANAB(3,60),BNAB(3,60),ENWK(60),	9350
	SLFIN,SPFW,SOW,SSOW,ELDW,SLDW,AIES,DJK(3,60),UMAS(3,60),	9360
C	DATA GENERATED BY PFF	9370
	6*PU(150),PKU(150),EWO,SWKO,EWM,SKM,EPFH,SPFH,EBPH,SBPH,NINT,	9380
	FX(61),FX(61),EFMU,VFMD,	9390
C	UA(A) GENERATED BY SPIS	9400
	7*MSU,SAKU,ENSQ,SHSD,	9410
C	DATA GENERATED BY INVL	9420

8EMHD(3,3),SMHD(3,3),END(3,3),SND(3,3),EED(3,3),SED(3,3),DD(3,3),	9430
8UMAC(3),EACM(3),SACM(3),EACN(3),SACN(3),ACNS,	9440
C DATA GENERATED BY MPD	9450
9EMHY(10),SMHY(10),ENHR(10),SNHR(10),EEMP(10),SEMP(10),OMP(10)	9460
9,EMHF(10),SMHF(10)	9470
DIMENSION T(50),P(50)	9480
A=0.0	9490
EMHM=0.0	9500
SMHM=0.0	9510
ENMP=0.0	9520
SNMP=0.0	9530
U =0.0	9540
EE =0.0	9550
SE =0.0	9560
SUM1=0.0	9570
SUM2=0.0	9580
DO 10 I=1,NSCT	9590
MM=4*OL(I)	9600
DO 9 J=1,NN	9610
NN=NSCH(I,J)	9620
EMHM=EMHM+EMHD(I,J)*NN	9630
SMHM=SMHM+SMHD(I,J)*SMHD(I,J)*NN*NN	9640
SNMP=SNMP+SNH(I,J)*SND(I,J)*NN*NN	9650
ENMP=ENMP+ENH(I,J)*NN	9660
EE =EE +EEU(I,J)*NN	9670
SE =SE +SEU(I,J)*SED(I,J)*NN*NN	9680
U=U+UD(I)*NN	9690
ENI=AN(I,J)+UN(I,J)*UEL(I,INT)	9700
IF(L/I) 6,8,0	9710
6 ENI=0.0	9720
8 SUM1=SUM1+NSCH(I,J)*ENI*(1+ACNS/168.)	9730
SUM2=SUM2+NSCH(I,J)*NSCH(I,J)*SNI(I,J)*SNI(I,J)*(1+ACNS*ACNS/	9740
128224.)	9750
9 CONTINUE	9760
10 CONTINUE	9770
SMHM=SQRT(SMHM)	9780
SNMP=SQRT(SNMP)	9790
SEMP(IINT)=SQRT(SE/(NINT*NINT))	9800
EEMP(IINT)=EE/NINT	9810
OMP(IINT)=U/NINT	9820
C CALCULATE MANHOURS PER YEAR	9830
NA=50	9840
DO 20 I=1,NA	9850
T(I)=1+400.0	9860
E=EMHM-T(I)*(EWM/52.+SUM1/8736.)	9870
S=SMHM*SMHM+T(I)*T(I)*(SWKM*SWKM/2704.+SUM2/76317696.)	9880
S=SQRT(S)	9890
IF(S) 13,15,12	9900
12 CALL NML(A,E,S,PI)	9910
P(I)=PI	9920
GO TO 20	9930
13 IF(L) 16,16,15	9940
15 P(I)=0.0	9950
GO TO 20	9960
16 P(I)=1.0	9970
20 CONTINUE	9980
CALL MNDV(T,P,NA,EMH,SMH)	9990
EMHY(IINT)=EMH	10000
SMHY(IINT)=SMH	10010
C CALCULATE MANHOURS PER MAINTENANCE PROGRAM	10020
EFHM=ENI*EFMD	10030
VFHM=ENI*VFMD	10040
C CALCULATE MANHOURS PER FLIGHT HOUR	10050
DO 40 I=1,NA	10060
T(I)=2.01	10070
E=EMHM-T(I)*EFHM	10080
S=SMHM*SMHM+T(I)*T(I)*VFHM	10090
S=SQRT(S)	10100
IF(S) 33,35,32	10110
32 CALL NML(A,E,S,PI)	10120
P(I)=PI	10130
GO TO 40	10140
33 IF(L) 35,35,36	10150
35 P(I)=1.0	10160
GO TO 40	10170
36 P(I)=0.0	10180
40 CONTINUE	10190
CALL MNDV(T,P,NA,EMH,SMH)	10200
EMHF(IINT)=EMH	10210
SMHF(IINT)=SMH	10220
C CALCULATE NUP HOURS PER HOUR	10230
NA=20	10240
DO 30 I=1,NA	10250
T(I)=1+0.05	10260
E=EEMP-T(I)*(168.+EWM*SUM1)	10270
S=SNMP*SNMP+T(I)*T(I)*(28224.+SWKM*SWKM*SUM2)	10280
S=SQRT(S)	10290
IF(S) 23,23,22	10300

22	CALL NML(A,E,S,P1)	10310
	P(1)=P1	10320
	GO TO 30	10330
23	IF(E) 26,26,25	10340
25	P(1)=0.0	10350
	GO TO 30	10360
26	P(1)=1.0	10370
30	CONTINUE	10380
	CALL MNDOV(T,P,N,EN,SN)	10390
	EMHK(IIN)=ELH	10400
	SMHK(IIN)=SM	10410
	RETURN	10420
	END	10430
	SUBROUTINE MNL(A,E,SU,P)	10440
	COMMON IINF,	10450
C	INPUT DATA	10460
	1UELI(10),KI,NSCT,NFOL(3),NSCH(3,3),NSPT,DISP(60),SISP(60),KIS(60),	10470
	2H,EMHI(3,3),SMHI(3,3),AN(3,3),BN(3,3),SMI(3,3),EMHS(60),SMHS(60),	10480
	3ENS(60),SNS(60),EMHP,SMHP,EMHB,SMHB,NI,KSET,ANU(3,60),BNU(3,60),	10490
	4EMHU(60),SMHU(60),EHU(60),SNU(60),ANAB(3,60),BNAB(3,60),ENWK(60),	10500
	5LFH,SPFH,ESUW,SSOW,ELOW,SLUW,AIES,DIK(3,60),UMAS(3,60),	10510
C	DATA GENERATED BY PFPF	10520
	6WKU(150),PWKU(150),EWKU,SWKU,EWKM,SWKM,EPFH,SPFH,EBPH,SBPH,NINT,	10530
	6X(61),FX(61),EFHD,VFHD,	10540
C	DATA GENERATED BY SP1S	10550
	7LMSU,SMSU,ENSD,SNSD,	10560
C	DATA GENERATED BY INVL	10570
	8EMHU(3,3),SMHU(3,3),END(3,3),SND(3,3),EED(3,3),SED(3,3),DD(3),	10580
	9UMAC(3),LAC(3),SACH(3),EACN(3),SACN(3),ACNS,	10590
C	DATA GENERATED BY MPD	10600
	9LMHY(10),SMHY(10),ENHR(10),SNHR(10),EEMP(10),SEMP(10),OMP(10)	10610
	9EMHK(10),SMHF(10)	10620
C	COMPUTE NORMAL(A,E,SD)	10630
	T=(A-E)/SD	10640
	IF(T-X(1)) 30,40,50	10650
30	P=0.0	10660
	RETURN	10670
40	P=FX(1)	10680
	RETURN	10690
50	GO 50 I=2,61	10700
	IF(T-X(I)) 52,54,56	10710
52	P=FX(I-1)+(FX(I)-FX(I-1))*(T-X(I-1))/(X(I)-X(I-1))	10720
	RETURN	10730
54	P=FX(I)	10740
	RETURN	10750
56	CONTINUE	10760
	P=1.0	10770
	RETURN	10780
	END	10790
	SUBROUTINE MNDOV(T,P,N,BART,SDEV)	10800
C	THIS ROUTINE CALCULATES THE MEAN AND STANDARD DEVIATION OF T	10810
	DIMENSION T(150),P(150)	10820
	BART=T(1)*P(1)	10830
	DO 10 I=2,N	10840
	BART=BART+T(I)*(P(I)-P(I-1))	10850
10	CONTINUE	10860
	SDEV=P(1)*(T(1)-BART)**2	10870
	DO 20 I=2,N	10880
	SDEV=SDEV+(P(I)-P(I-1))*(T(I)-BART)**2	10890
20	CONTINUE	10900
	IF(ABS(SDEV-.SE-10)) 30,30,40	10910
30	SDEV=0.0	10920
	RETURN	10930
40	SDEV=SQRT(SDEV)	10940
	RETURN	10950
	END	10960
	SUBROUTINE MNDO(T,P,N,BART,SDEV)	10970
C	THIS ROUTINE CALCULATES THE MEAN AND STANDARD DEVIATION OF T	10980
C	USING THE PROBABILITY DENSITY FUNCTION	10990
	DIMENSION T(150),P(150)	11000
	BART=0.0	11010
	SDEV=0.0	11020
	DO 10 I=1,N	11030
	BART=BART+T(I)*P(I)	11040
	SDEV=SDEV+(I)*T(I)*P(I)	11050
10	CONTINUE	11060
	SDEV=SDEV-BART	11070
	IF(ABS(SDEV-.SE-10)) 30,30,40	11080
30	SDEV=0.0	11090
	RETURN	11100
40	SDEV=SQRT(SDEV)	11110
	RETURN	11120
	END	11130
	SUBROUTINE DMNDV(T,P,N,BART,SDEV)	11060
C	THIS ROUTINE CALCULATES THE MEAN AND STANDARD DEVIATION OF T	11070
	DOUBLE PRECISION T	11080
	DIMENSION T(150),P(150)	11090
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```

      BART=T(1)*P(1)
      DO 10 I=2,N
      BART=BART+T(1)*(P(1)-P(1-1))
10    CONTINUE
      SDEV=P(1)*(T(1)-BART)**2
      DO 20 I=2,N
      SDEV=SDEV+(P(1)-P(1-1))*(T(1)-BART)**2
20    CONTINUE
      IF(AJS(SDEV-.5E-10)) 30,30,40
30    SDEV=0.0
      RETURN
40    SDEV=SQRT(SDEV)
      RETURN
      END
10090
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10220

/*      REQUIRED PLACE FORTHAN BCD SOURCE BEFORE THIS CARD
//LKED,SYSPRINT DD SPACE>(CYL,[1,1])
//LKED,SYSDH DD DATA,SPACE>(TRK,[5,5])
/*
//CHG,FTU5F001 DD DATA,SPACE>(CYL,[1,1])
9999

SAMPLE RUN - INPUT DATA BASED ON RESULTS FOR 11 NON-150 AIRCRAFT SAMPLE
4.88000 2.00000 3.02000 1.05200 3.03000 1.04600 0.00729
0.79000 1.92000 0.00000 2.74000 0.00000
  2      3      4      4
25.00000 30.00000 35.00000 40.00000 45.00000 50.00000
  1      1      2
  2
43.20000 26.70000 0.00000 0.00000 0.00000
0.00161 0.00002 0.00000 0.00000 0.00000
0.00000 0.00000 0.00000 0.00000 0.00000
0.01488 -0.00002 0.00000 0.00000 0.00000
0.24414 -0.00336 0.00000 0.00000 0.00000
1.00000 1.00000 1.00000 1.00000
.00080 .00000 .00744 .12209
  10
43.20000 26.70000 0.00000 0.00000 0.00000
0.02032 -0.00030 0.00000 0.00000 0.00000
0.01860 -0.00030 0.00000 0.00000 0.00000
0.09396 -0.00159 0.00000 0.00000 0.00000
0.10571 -0.00106 0.00000 0.00000 0.00000
1.00000 1.00000 1.00000 1.00000
.01016 .00933 .04698 .05285
  2 10
433.90000 417.00000 219.70000 5.00000 261.30000
30.90000 39.40000 21.90000 0.33000 38.70000
0.02016 -0.00030
0.01842 -0.00030
0.01811 -0.00159
0.29232 -0.01105 0.00000 0.00000 0.00000
3.00000 3.00000 3.00000 1.00000
.01008 .00921 .00906 .14616
1.10000 0.84000 5.00000 14.50000 0.00190
3.50000 3.97000 13.30000 19.70000 0.27100
8.20000 7.74000 3.30000 5.40000 0.16000
1.70000 1.64000 2.80000 6.80000 0.09800
7.70000 6.65000 0.00000 0.00000 50.00000 25.80000 2
11.30000 13.52000 0.00000 0.00000 13.90000 14.10000 2
6.80000 7.23000 0.00000 0.00000 29.80000 63.80000 2
3.50000 9.10000 0.00000 0.00000 25.70000 25.30000 2
9999
/*

```



AD-A045 625

GENERAL DYNAMICS SAN DIEGO CALIF CONVAIR AEROSPACE DIV

F/G 1/5

F-106 SCHEDULED MAINTENANCE STUDY. USER'S MANUAL, (U)

SEP 72 G WANG, R S GROTE, J R COOPER

F41608-71-D-1383

UNCLASSIFIED

GDCA-AHD72-006

NL

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ADA045625

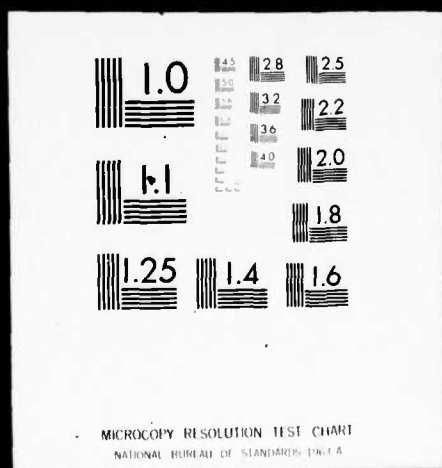


END  
DATE  
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11-77

DOC

6 OF 6

ADA045625



## 6.14 NETWORK ANALYSIS MODEL

```

//T9897V JOB 01: G. WANG. : ,PKTY>02 X3408 C
//C9897V EXEC P9045G,PARM,ASSY>[MAP,L1ST,BCD],
// PARM,LKED>L1ST,XREF>TIME>02,ACCT>D35323007
//ASSY.SYSIN DD DATA,SPACE>[CYL,(1,1)] 1440 CDS
C NETWORK ANALYSIS MODEL-- 370
COMMON TNEM(20),PNEM(20),NNEM,TMHE(20),PMHE(20),NMHE,NBR,TMH(150,
120),PMH(150,20),NMH(150),TSP(150,20),PSP(150,20),NSP(150),
2FHM(150),K(149),L(149),M(149),TNOR(20),PNOR(20),NNOR,BARN,DEV,TMHI
3(20),PMHI(20),NMHI,FM,BARM,DEVM,BNE,ONE,BMHE,DMHE,LKFX(150)
DIMENSION HEAD(20)
C READ 9999 IN FIRST AND LAST CARD FOR END OF FILE TEST
READ (5,99) LOF9
C SET ORIGINAL VALUES
1 DO 40 I=1,20
  TMH(I)=0.0
  PMH(I)=0.0
40 CONTINUE
  NMH=0
  FI=1.0
  LIL=0.0
  UIL=0.0
  LMIL=0.0
  UMIL=0.0
  READ(5,103) HEAD
  IF(HEAD(1)-EQU) 3,2,3
2 CALL EOJMS6
  CALL EXII
3 READ(5,100) NBR,NNEM,NMHE
  READ(5,101) (TNEM(I),I=1,NNEM)
  READ(5,101) (PNEM(I),I=1,NNEM)
  READ(5,101) (TMH(I),I=1,NMHE)
  READ(5,101) (PMH(I),I=1,NMHE)
  READ(5,102) (LKFX(I),I=1,NBR)
  READ(5,101) (FHM(I),I=1,NBR)
  READ(5,102) (NMH(I),I=1,NBR)
  DO 10 I=1,NBR
    NI=NMH(I)
    READ(5,101) ((PMH(I,J),J=1,NI)
    READ(5,101) ((PMH(I,J),J=1,NI)
10 CONTINUE
  NI=NBR-1
  DO 20 I=1,NI
    READ(5,102) K(I),L(I),M(I)
20 CONTINUE
  WRITE(6,300) HEAD
  WRITE(6,301)
  IF(NNEM) 60,00,50
50 WRITE(6,302)
  WRITE(6,303) (TNEM(I),I=1,NNEM)
  WRITE(6,304) (PNEM(I),I=1,NNEM)
  WRITE(6,305)
  WRITE(6,303) (TMHE(I),I=1,NMHE)
  WRITE(6,304) (PMHE(I),I=1,NMHE)
60 WRITE(6,307)
  WRITE(6,308) NBR
  WRITE(6,309) (LKFX(I),I=1,NBR)
  WRITE(6,310) (FHM(I),I=1,NBR)
  WRITE(6,311)
  DO 30 I=1,NBR
    NI=NMH(I)
    WRITE(6,312) 1,(TMH(I,J),J=1,NI)
    WRITE(6,313) 1,(PMH(I,J),J=1,NI)
30 CONTINUE
  WRITE(6,314)
  NI=NBR-1
  WRITE(6,315) (1,K(I),L(I),M(I),I=1,NI)
  CALL NAME
  WRITE(6,200) /
  IF(NNEM) 64,04,62
62 WRITE(6,302)
  WRITE(6,306) BNE,ONE
  WRITE(6,305)
  WRITE(6,306) BMHE,DMHE
64 WRITE(6,201)
  WRITE(6,303) (TNOR(I),I=1,NNOR)
  WRITE(6,304) (PNOR(I),I=1,NNOR)
  WRITE(6,306) BARN,DEV
  WRITE(6,202)
  WRITE(6,303) (TMHI(I),I=1,NMHI)
  WRITE(6,304) (PMHI(I),I=1,NMHI)
  WRITE(6,306) BARM,DEVM
  IF(NNLM) 1,1,80
80 WRITE(6,203)
  WRITE(6,204) FM
  WRITE(6,310) (FHM(I),I=1,NBR)

```

[illegible]

IF (NBR-I) 122,122,116	1650
116 NI=N3	1660
DO 118 J=1,N1	1670
T1(J)=T3(J)	1680
P1(J)=P3(J)	1690
118 CONTINUE	1700
120 CONTINUE	1710
122 NMHI=N3	1720
DO 124 I=1,NMHI	1730
TMHI(I)=T3(I)	1740
PMHI(I)=P3(I)	1750
124 CONTINUE	1760
CALL MNDV(T,NI,PMHI,NMHI,HARM,DEVM)	1770
C CALCULATE INSPECTION NORM	1780
CALL NAM	1790
RETURN	1800
C C	1810
C OUTPUT OF ABOVE CALCULATIONS CONSISTS OF THE FOLLOWING ITEMS	1820
C INOR(I),PNOR(I),NMOR,BARM,DEV -- ALL FROM NAM	1830
C TMHI(I),PMHI(I) VALUES OF MANHOURS AND PROBABILITY DEFINING	1840
C CALCULATED DISTRIBUTION OF INSPECTION MANHOURS	1850
C BARM,DEV, MEAN AND STANDARD DEVIATION OF MANHOUR	1860
C DISTRIBUTION	1870
C C	1880
C	1890
C CALCULATE AN ESTIMATE OF INSPECTION NORM AND MANHOURS	1900
C CALCULATE ESTIMATE OF LOOK PHASE MANHOURS BASED ON INPUT TASK MANHOUR	1910
200 DO 202 I=1,NBR	1920
LK=1	1930
IF(LKFX(I)-1) 204,204,202	1940
202 CONTINUE	1950
STOP	1960
204 NI=NMHI(LK)	1970
DO 206 I=1,NI	1980
P1(I)=PMHI(LK,I)	1990
T1(I)=TMHI(LK,I)	2000
206 CONTINUE	2010
NI=LK+1	2020
DO 216 I=NI,NBR	2030
IF(LKFX(I)-1) 208,208,216	2040
208 N2=NMHI(I)	2050
DO 210 J=1,N2	2060
T2(J)=TMHI(I,J)	2070
P2(J)=PMHI(I,J)	2080
210 CONTINUE	2090
CALL CONV(P1,P2,P3,T1,T2,T3,N1,N2,N3)	2100
IF(NBR-1) 222,222,212	2110
212 NI=N3	2120
DO 214 J=1,NI	2130
T1(J)=T3(J)	2140
P1(J)=P3(J)	2150
214 CONTINUE	2160
216 CONTINUE	2170
222 NMHI=N3	2180
DO 224 I=1,NMHI	2190
TMHI(I)=T3(I)	2200
PMHI(I)=P3(I)	2210
224 CONTINUE	2220
C CALCULATE ESTIMATE OF INSPECTION NORM	2230
CALL NAM	2240
C CALCULATE MEAN VALUE OF CALCULATED LOOK MANHOUR DISTRIBUTION	2250
CALL MNDV(T3,P3,N3,BARM,DEV)	2260
C CALCULATE MEAN VALUES OF EMPIRICAL NORM AND MANHOUR DISTRIBUTIONS	2270
CALL MNDV(TNEM,PNEM,NNEM,BNE,DNE)	2280
CALL MNDV(TNME,PMME,NMME,BMME,DMME)	2290
C ADJUST SCALING FACTORS	2300
C COMPARE MEAN VALUES OF MANHOURS	2310
IF(AUS(BMME-BARM)=0,1) 250,240,240	2320
240 FM=DMME/BARM	2330
DO 246 I=1,NBR	2340
IF(LKFX(I)-1) 242,242,246	2350
242 NI=NMHI(I)	2360
DO 244 J=1,NI	2370
TMHI(I,J)=TMHI(I,J)*FM	2380
244 CONTINUE	2390
246 CONTINUE	2400
GO TO 260	2410
C COMPARE MEAN VALUES OF NORM	2420
250 IF(AUS(BPME-BNE)=0,1) 270,260,260	2430
260 DO 268 I=1,NBR	2440
IF(LKFX(I)-1) 262,262,266	2450
262 FHM(I)=(FHM(I)*BNE)/(FM*BARM)	2460
GO TO 268	2470
266 FHM(I)=(FHM(I)*BNE)/BARM	2480
268 CONTINUE	2490
270 RETURN	2500
C C	2510

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3390

PH(1)=P1(1)	3400
10 CONTINUE	3410
DO 12 I=1,N2	3420
TH(1+I)=T2(1)	3430
PH(1+I)=P2(1)	3440
12 CONTINUE	3450
C MULTIPLY P3 VALUES BY PROPER P1 AND P2 VALUES	3460
DO 20 I=1,N1	3470
DO 16 J=1,N2	3480
UIF=12(J)-T1(1)	3490
IF(ABS(PIF)-5.E-7) 14,13,13	3500
13 IF(UIF) 16,14,15	3510
14 PH(1)=PH(1)+P2(J)	3520
GO TO 20	3530
15 IF(J-1) 151,151,152	3540
151 PH(1)=0.0	3550
GO TO 20	3560
152 PH(1)=PH(1)+P2(J-1)	3570
GO TO 20	3580
16 CONTINUE	3590
20 CONTINUE	3600
DO 30 I=1,N2	3610
DO 26 J=1,N1	3620
UIF=T1(J)-T2(1)	3630
IF(ABS(DIF)-5.E-7) 24,23,23	3640
23 IF(UIF) 26,24,25	3650
24 PH(1+I)=PH(1+I)+P1(J)	3660
GO TO 30	3670
25 IF(J-1) 251,251,252	3680
251 PH(1+I)=0.0	3690
GO TO 30	3700
252 PH(1+I)=PH(1+I)+P1(J-1)	3710
GO TO 30	3720
26 CONTINUE	3730
30 CONTINUE	3740
C ARRANGE TH,PH IN ORDER OF INCREASING TH	3750
CALL ORD(TH,PH,N3)	3760
C ELIMINATE DUPLICATE TH-PH PAIRS	3770
32 DO 40 I=2,N3	3780
IF(ABS(TH(1)-TH(I-1))-5.E-7) 34,34,40	3790
34 K=I+1	3800
DO 36 J=K,N3	3810
TH(J-1)=TH(J)	3820
PH(J-1)=PH(J)	3830
36 CONTINUE	3840
N3=N3-1	3850
GO TO 32	3860
40 CONTINUE	3870
C ELIMINATE UNNECESSARY POINTS	3880
42 DO 48 I=2,N3	3890
IF(ABS(PH(1)-PH(I-1))-5.E-7) 44,44,48	3900
44 K=I+1	3910
DO 46 J=K,N3	3920
TH(J-1)=TH(J)	3930
PH(J-1)=PH(J)	3940
46 CONTINUE	3950
N3=N3-1	3960
GO TO 42	3970
48 CONTINUE	3980
C REDUCE VECTOR SIZES	3990
CALL REDC(TH,PH,N3)	4000
C PLACE PH VALUES IN P3, AND TH VALUES IN T3	4010
DO 50 I=1,N3	4020
P3(1)=PH(1)	4030
T3(1)=TH(1)	4040
50 CONTINUE	4050
RETURN	4060
END	4070
SUBROUTINE (CONV(P1,P2,P3,T1,T2,T3,N1,N2,N3)	4100
C THIS ROUTINE OUTPUTS AS T3-P3 THE CONVOLUTION OF T1-P1 AND T2-P2	4110
DIMENSION P1(20),P2(20),P3(20),T1(20),T2(20),T3(20),PD1(20),	4120
IPD2(20),PROD(20,20),TT(20,20),TU(400),PROE(400)	4130
EQUIVALENCE (TU(1),TT(1,1))	4132
EQUIVALENCE (PROE(1),PROD(1,1))	4135
C CALCULATE DISCRETE PROBABILITY DENSITY FUNCTION	4140
PD1(1)=P1(1)	4150
PD2(1)=P2(1)	4160
DO 2 I=2,N1	4170
PD1(1)=P1(1)-P1(I-1)	4180
2 CONTINUE	4190
DO 3 I=2,N2	4200
PD2(1)=P2(1)-P2(I-1)	4210
3 CONTINUE	4220
C CALCULATE ELEMENTS OF MATRICES	4230
DO 20 I=1,N1	4240
DO 10 J=1,N2	4250
TT(1,J)=T1(1)+T2(J)	4260
PROD(1,J)=PD1(1)*PD2(J)	4270
10 CONTINUE	4280
20 CONTINUE	4290
N3=N1+N2	4300

C ARRANGE ELEMENTS IN ORDER OF INCREASING TT(I)	4310
DO 24 J=1,N2	4320
DO 23 I=1,N1	4330
K=I+N1*(J-1)	4340
TU(K)=TT(I,J)	4350
PROE(K)=PROD(I,J)	4360
23 CONTINUE	4370
24 CONTINUE	4380
CALL ORD(TT,PROD,N3)	4390
C ELIMINATE DUPLICATE VALUES IN TT	4400
32 DO 40 I=2,N3	4410
IF(ABS(TT(I)-TT(I-1))-5.E-7) 34,34,40	4420
34 PROE(I-1)=PROE(I-1)+PROE(I)	4430
GO TO 42	4440
40 CONTINUE	4450
GO TO 46	4460
42 K=I+1	4470
DO 44 J=K,N3	4480
TU(J-1)=TU(J)	4490
PROE(J-1)=PROE(J)	4500
44 CONTINUE	4510
N3=N3-1	4520
GO TO 32	4530
C CALCULATE CUMULATIVE PROBABILITY	4540
46 DO 50 I=2,N3	4550
PROE(I)=PROE(I)+PROE(I-1)	4560
50 CONTINUE	4570
C ELIMINATE UNNECESSARY POINTS	4580
N=2	4590
60 DO 62 I=N,N3	4600
K=1	4610
IF(ABS(PROE(I)-PROE(I-1))-5.E-7) 64,64,62	4620
62 CONTINUE	4630
GO TO 70	4640
64 N3=N3-1	4650
IF(I=N3) 66,66,70	4660
66 DO 67 J=K,N3	4670
PROE(J)=PROE(J+1)	4680
TU(J)=TU(J+1)	4690
67 CONTINUE	4700
N=K	4710
GO TO 60	4720
C REDUCE VECTOR SIZES IF NECESSARY	4730
70 CALL REDC(TT,PROD,N3)	4740
80 DO 85 I=1,N3	4750
P3(I)=PROE(I)	4760
T3(I)=TU(I)	4770
85 CONTINUE	4780
RETURN	4790
END	4800
SUBROUTINE ORD(TT,PROD,N3)	4790
C THIS ROUTINE ARRANGES TT-PROD PAIRS IN INCREASING ORDER OF TT	4800
DIMENSION TT(40),PROD(40)	4810
N=N3-1	4820
DO 27 I=1,N	4830
K=I+1	4840
DO 26 J=K,N3	4850
IF(TT(I)-TT(J)) 26,26,25	4860
25 HOLD=TT(I)	4870
TT(I)=TT(J)	4880
TT(J)=HOLD	4890
HOLD=PROD(I)	4900
PROD(I)=PROD(J)	4910
PROD(J)=HOLD	4920
26 CONTINUE	4930
27 CONTINUE	4940
RETURN	4950
END	4960
SUBROUTINE REDC(TT,PROD,N3)	4970
C THIS ROUTINE REDUCES VECTORS TT,PROD TO ACCEPTABLE SIZES	4980
DIMENSION TT(40),PROD(40)	4990
70 IF(N3-20) 80,80,71	5000
71 SUM=TT(3)-TT(1)	5010
IDRP=2	5020
DO 74 I=4,N3	5030
(SUM=)TT(I)-TT(1-2)	5040
IF(I*SUM-SUM) 72,74,74	5050
72 SUM=SUM	5060
IDRP=I-1	5070
74 CONTINUE	5080
K=N3-1	5090
DO 76 I=IDRP,K	5100
TT(I)=TT(I+1)	5110
PROD(I)=PROD(I+1)	5120
76 CONTINUE	5130
N3=K	5140
GO TO 70	5150
80 RETURN	5160
END	5170
SUBROUTINE XDOV(T,P,N,BART,SOEV)	5180



```

C THIS ROUTINE CALCULATES THE MEAN AND STANDARD DEVIATION OF T
  DIMENSION T(20),P(20)
  BART=T(1)*P(1)
  DO 10 I=2,N
    BART=BART+T(I)*(P(I)-P(I-1))
  10 CONTINUE
  SDEV=P(1)*(T(1)-BART)**2
  DO 20 I=2,N
    SDEV=SDEV+(P(I)-P(I-1))*(T(I)-BART)**2
  20 CONTINUE
  SDEV=SQRT(SDEV)
  RETURN
  END
/* REQUIRED PLACE FORTRAN BCD SOURCE BEFORE THIS CARD
//LKED,SYSPRINT DD SPACE>[CYL,[1,1]]
//LKED,SYSDIN DD DATA,SPACE>[TRK,[5,5]]
/*
//CHG,FT05F001 DD DATA,SPACE>[CYL,[1,1]]
9999
SAMPLE CASE 1
11 5 5
U.      5.      4.      4.2      6.
0.      .1      .5      .8      1.
0.      5.      4.      4.2      6.
0.      .1      .5      .8      1.
0 2 0 2 0 2 0 2 0 2 0
1.      1.      1.      1.      .5      1.      .75      1.
.33      1.      1.
2 6 2 6 2 4 2 4 2 4 2
0.      .5
0.      1.
0.      .2      .4      .6      .8      1.
0.      .2      .4      .6      .8      1.
0.      1.
0.      1.
0.      .2      .5      .9      1.4      2.0
0.      .2      .4      .6      .8      1.
0.      1.2
0.      1.
0.      .1      .2      .4
0.      .2      .8      1.
0.      .6
0.      1.
0.      .5      .7      .9
0.      .2      .6      1.
0.      1.5
0.      1.
0.      .3      .4      .5
0.      .4      .8      1.
0.      .8
0.      1.
3 4 1
7 8 1
2 7 1
2 3 0
1 2 1
5 6 1
910 1
5 9 0
1 5 1
111 1
SAMPLE CASE 2
8
1.      1.      1.      1.      1.      1.      1.
2 2 2 2 2 2 2 2
0.      1.5
0.      1.
0.      3.
0.      1.
0.      4.
0.      1.
0.      5.
0.      1.
0.      6.
0.      1.
0.      3.5
0.      1.
0.      2.
0.      1.
0.      7.
0.      1.
2 3 0
4 5 0
2 4 1
2 7 0
1 2 1
1 6 1
1 8 0
9999
/*

```

## 6.15 MANHOUR AND NORM DATA - TASK 7

### 6.15.1 SUM UNSCHEDULED MAINTENANCE ACTIONS

```

//C9897K JOB 01: 6, WANG 1, PRTY>02, TYPRUN>HOLD
//C9897K EXEC P9655L, TIME>02, ACCT>D35323007
//CHG, TU12 DD DISP>X, PASS>1, UNIT>[A+F1, 2, DEFER], DSN>A, 9897416, CT12/13 1
// VOL>SER>[F1, A+F1, B+F1, C+F1, D+F1, E+F1, F+F1, G+F1, H+F1, CT12 2
// I+F1, J+F1, K+F1, L+F1, M+F1, N+F1, O+F1, P+F1, Q+F1, R+F1, S+F1] T12 3
//CHG, TU22 DD DISP>X, PASS>1, UNIT>[A+F5, 2, DEFER], DSN>E, 9897460, CT22/23 1
// VOL>SER>[F5, A+F5, B+F5, C+F5, D+F5, E+F5, F+F5, G+F5, H+F5, CT22 2
// I+F5, J+F5, K+F5, L+F5, M+F5, N+F5, O+F5, P+F5, Q+F5, R+F5, S+F5] T22 3
//CHG, INPUT DU 0.5SPACE>X, CYL(1,13) 1440 COS
00000 COMBINE COMPILE G. WANG, C98970
01040 DATE-WRITTEN, 27 JUL 72. C98970
01050 REMARKS. C98970
02000 ENVIRONMENT DIVISION. C98970
02010 CONFIGURATION SECTION. C98970
02020 SOURCE-COMPUTER, IBM-360. C98970
02030 OBJECT-COMPUTER, IBM-360. C98970
02100 INPUT-OUTPUT SECTION. C98970
02110 FILE-CONTROL. C98970
02120 SELECT IN-FILE-DB ASSIGN TO UT-S-TU12 C98970
02130 RESERVE 1 ALTERNATE AREA. C98970
02140 SELECT IN-FILE-ISC ASSIGN TO DA-S-DT01 C98970
02150 RESERVE 1 ALTERNATE AREA. C98970
02160 SELECT OUT-DATA ASSIGN TO UT-S-TU22 C98970
02170 RESERVE 1 ALTERNATE AREA. C98970
10000 DATA DIVISION. C98970
10010 FILE SECTION. C98970
10100 FD IN-FILE-DB C98970
10130 BLOCK CONTAINS 40 RECORDS C98970
10140 RECORD CONTAINS 70 CHARACTERS C98970
10150 LABEL RECORDS ARE OMITTED C98970
10160 DATA RECORDS ARE IN-REC-D-B. C98970
10200 01 IN-REC-D-B SYNC. C98970
10210 02 FILLER PICTURE X(70). C98970
11300 FD IN-FILE-ISC C98970
11320 RECORDING MODE IS F C98970
11330 BLOCK CONTAINS 20 RECORDS C98970
11340 RECORD CONTAINS 80 CHARACTERS C98970
11350 LABEL RECORDS ARE STANDARD C98970
11360 DATA RECORDS ARE IN-REC-ISC. C98970
11400 01 IN-REC-ISC SYNC. C98970
11410 02 FILLER PICTURE X(80). C98970
12100 FD OUT-DATA C98970
12120 RECORDING MODE IS F C98970
12130 BLOCK CONTAINS 60 RECORDS C98970
12140 RECORD CONTAINS 50 CHARACTERS C98970
12150 LABEL RECORDS ARE OMITTED C98970
12160 DATA RECORDS ARE TAPE-FILE. C98970
12180 01 TAPE-FILE SYNC PICTURE X(50). C98970
30000 WORKING-STORAGE SECTION. C98970
30010 77 ISCHRONAL SYNC PICTURE X, C98970
30020 77 WDC-TEMP SYNC PICTURE X, C98970
30040 77 WEEK-TEMP SYNC PICTURE 999, C98970
30050 77 CNT SYNC COMPUTATIONAL PICTURE S999, C98970
30060 77 CUR-SN PICTURE X(8) VALUE SPACE. C98970
30070 77 P-WLEN PICTURE S999 COMPUTATIONAL. C98970
30080 77 P-FLT-MHS PICTURE S9(6) COMPUTATIONAL. C98970
30100 77 NO-WUL SYNC PICTURE 9999 VALUE ZERO. C98970
30170 77 CNT SYNC COMPUTATIONAL PICTURE S999, C98970
30400 77 ISC-TEMP SYNC PICTURE X(8) VALUE SPACE. C98970
30410 77 PREV-TESTED-SN SYNC PICTURE X(8) VALUE SPACE. C98970
30420 77 ISC-FLAG SYNC PICTURE X VALUE SPACE. C98970
30430 77 MIN-ISC-WEEK SYNC COMPUTATIONAL PICTURE S999 VALUE 9999. C98970
30440 77 TEMP-WUL SYNC PICTURE X(8). C98970
30510 77 TEMP-CU-NO SYNC PICTURE S99 COMPUTATIONAL. C98970
30520 77 NO-WDC-COLS COMPUTATIONAL PICTURE S999 SYNC VALUE 421. C98970
30530 77 BF COMPUTATIONAL PICTURE S999 SYNC VALUE 423. C98970
30540 77 ONE SYNC PICTURE X VALUE 111. C98970
30550 77 TWO SYNC PICTURE X VALUE 121. C98970
30560 77 POS-WDC COMPUTATIONAL PICTURE S999, C98970
30570 77 ISC-TITLE-FLAG SYNC PICTURE X, C98970
30580 77 NI-TITLE-FLAG SYNC PICTURE X, C98970
30590 77 NI-LINE-FLAG SYNC PICTURE X, C98970
30600 77 ISC-LINE-FLAG SYNC PICTURE X, C98970
30610 77 PAGE-NUMBER-ISC PICTURE S99 SYNC VALUE ZERO. C98970
30615 77 PAGE-NUMBER-NI PICTURE S99 SYNC VALUE ZERO. C98970
30620 77 NO-REC-PRINT-ISC PICTURE 9(7) VALUE ZERO. C98970
30630 77 NO-REC-PRINT-NI PICTURE 9(7) VALUE ZERO. C98970

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6-264

50010	OPEN-FILES.	C98970
50020	OPEN INPUT IN-FILE-DB, IN-FILE-ISC, OUTPUT OUT-DATA.	C98970
50040	PERFORM READ-ISC-A-C THRU END-RIAC.	C98970
50045	PERFORM READ-IN-TITLE-DATA THRU END-RIID.	C98970
51000	PERFORM RESET-HMC-LINE-NI THRU END-RESET-NI.	C98970
51005	PERFORM RESET-HMC-LINE-ISC THRU END-RESET-ISC.	C98970
51010	READ-NSG-WUC.	C98970
51020	READ IN-FILE-DB INTO INPUT-DB.	C98970
51030	AT END GO TO CLOSE-TABLE.	C98970
51040	IF IDENT IS NOT EQUAL TO 141 GO TO READ-NSG-WUC.	C98970
51050	PERFORM PROC-WDC THRU END-PROC-WDC.	C98970
51060	IF POS-WDC IS EQUAL TO ZERO GO TO READ-NSG-WUC.	C98970
51100	NEXT-WUC.	C98970
51110	MOVE WUC TO CUR-WUC.	C98970
51150	ADD 1 TO NO-WUC.	C98970
51200	NEXT-HMC.	C98970
51210	MOVE HIC TO CUR-HMC.	C98970
51240	PERFORM CHECK-ISCHRONAL THRU END-CI.	C98970
51250	IF ISCHRONAL IS EQUAL TO ONE PERFORM ADD-ISC.	C98970
51260	ELSE PERFORM ADD-NI.	C98970
51300	READ-DATA.	C98970
51310	READ IN-FILE-DB INTO INPUT-DB.	C98970
51320	AT END GO TO CLOSE-TABLE.	C98970
51330	IF IDENT IS NOT EQUAL TO 141 GO TO READ-DATA.	C98970
51340	PERFORM PROC-WDC THRU END-PROC-WDC.	C98970
51350	IF POS-WDC IS EQUAL TO ZERO GO TO READ-DATA.	C98970
51360	PERFORM CHECK-ISCHRONAL THRU END-CI.	C98970
51370	IF WUC IS NOT EQUAL TO CUR-WUC GO TO OUTPUT-TABLE-END.	C98970
51380	IF HMC IS NOT EQUAL TO CUR-HMC GO TO OUTPUT-LINE.	C98970
51390	IF ISCHRONAL IS EQUAL TO ONE PERFORM ADD-ISC.	C98970
51400	ELSE PERFORM ADD-NI.	C98970
51490	GO TO READ-DATA.	C98970
51500	RESET-HMC-LINE-NI.	C98970
51510	MOVE ZERO TO CNT.	C98970
51520	RESET-HMC-LINE-1.	C98970
51530	ADD 1 TO CNT.	C98970
51550	MOVE ZERO TO HMC-NI [CNT].	C98970
51560	IF CNT IS LESS THAN NO-WDC-COLS GO TO RESET-HMC-LINE-1.	C98970
51590	END-RESET-NI. EXIT.	C98970
52000	PROC-WDC.	C98970
52010	MOVE ZERO TO POS-WDC.	C98970
52020	MOVE ZERO TO CNT.	C98970
52030	PROC-WDC-A.	C98970
52040	ADD 1 TO CNT.	C98970
52050	MOVE WDC-LIST [CNT] TO WDC-TEMP.	C98970
52060	IF WDC IS LESS THAN WDC-TEMP GO TO END-PROC-WDC.	C98970
52070	IF WDC IS EQUAL TO WDC-TEMP GO TO PROC-WDC-C.	C98970
52080	IF CNT IS LESS THAN NO-WDC-COLS GO TO PROC-WDC-A.	C98970
52100	PROC-WDC-C.	C98970
52110	MOVE CNT TO POS-WDC.	C98970
52190	END-PROC-WDC. EXIT.	C98970
52200	OUTPUT-LINE-OF-NI-DATA.	C98970
52300	MOVE ZERO TO HMC-FREQ-TOTAL-NI.	C98970
52310	MOVE ZERO TO CNT.	C98970
52320	SUM-NI-COL.	C98970
52330	ADD 1 TO CNT.	C98970
52340	MOVE SUM-WDC-COL [CNT] TO TEMP-INDEX.	C98970
52350	ADD HMC-NI [TEMP-INDEX] TO HMC-FREQ-TOTAL-NI.	C98970
52360	IF CNT IS LESS THAN SUM-INDEX GO TO SUM-NI-COL.	C98970
52370	MOVE TWO TO ISOCHRONAL.	C98970
52380	MOVE COL-NO [1] TO TEMP-INDEX.	C98970
52390	MOVE HMC-NI [TEMP-INDEX] TO MA-HPO.	C98970
52400	MOVE COL-NO [2] TO TEMP-INDEX.	C98970
52410	MOVE HMC-NI [TEMP-INDEX] TO MA-PE.	C98970
52420	MOVE HMC-FREQ-TOTAL-NI TO NUMA.	C98970
52430	IF MA-HPO IS EQUAL TO ZERO AND	C98970
52440	MA-PE IS EQUAL TO ZERO AND	C98970
52450	NUMA IS EQUAL TO ZERO GO TO END-OUTPUT-LINE-NI-DATA.	C98970
52520	WRITE TAPE-FILE FROM REC-OUT.	C98970
52530	ADD 1 TO NO-REC-TAPE.	C98970
52580	PERFORM RESET-HMC-LINE-NI THRU END-RESET-NI.	C98970
52590	END-OUTPUT-LINE-NI-DATA. EXIT.	C98970
52600	OUTPUT-LINE-OF-ISC-DATA.	C98970
52700	MOVE ZERO TO HMC-FREQ-TOTAL-ISC.	C98970
52710	MOVE ZERO TO CNT.	C98970
52720	SUM-ISC-COL.	C98970
52730	ADD 1 TO CNT.	C98970
52740	MOVE SUM-WDC-COL [CNT] TO TEMP-INDEX.	C98970
52750	ADD HMC-ISC [TEMP-INDEX] TO HMC-FREQ-TOTAL-ISC.	C98970
52760	IF CNT IS LESS THAN SUM-INDEX GO TO SUM-ISC-COL.	C98970
52770	MOVE ONE TO ISOCHRONAL.	C98970
52780	MOVE COL-NO [1] TO TEMP-INDEX.	C98970
52790	MOVE HMC-ISC [TEMP-INDEX] TO MA-HPO.	C98970
52800	MOVE COL-NO [2] TO TEMP-INDEX.	C98970
52810	MOVE HMC-ISC [TEMP-INDEX] TO MA-PE.	C98970
52820	MOVE HMC-FREQ-TOTAL-ISC TO NUMA.	C98970

52830	IF MA-HPO IS EQUAL TO ZERO AND	C98970
52840	MA-PE IS EQUAL TO ZERO AND	C98970
52850	NUMA IS EQUAL TO ZERO GO TO END-OUTPUT-LINE-ISC-DATA.	C98970
52920	WRITE TAPE-FILE FROM REC-OUT.	C98970
52930	ADD 1 TO NO-REC-TAPE.	C98970
52980	PERFORM RESET-HMC-LINE-ISC THRU END-RESET-ISC.	C98970
52990	END-OUTPUT-LINE-ISC-DATA. EXIT.	C98970
53000	OUTPUT-TABLE-END.	C98970
53040	PERFORM OUTPUT-LINE-OF-NI-DATA THRU END-OUTPUT-LINE-NI-DATA.	C98970
53300	PERFORM OUTPUT-LINE-OF-ISC-DATA THRU	C98970
53310	END-OUTPUT-LINE-ISC-DATA.	C98970
53481	CHECK-ID.	C98970
53485	IF IDENI IS EQUAL TO 191 GO TO CLOSE-FILES.	C98970
53490	GO TO NEXT-WUC.	C98970
53500	CLOSE-TABLE.	C98970
53510	MOVE .9: TO IDEN7.	C98970
53520	GO TO OUTPUT-TABLE-END.	C98970
53700	OUTPUT-LINE.	C98970
53740	PERFORM OUTPUT-LINE-OF-NI-DATA THRU END-OUTPUT-LINE-NI-DATA.	C98970
53840	PERFORM OUTPUT-LINE-OF-ISC-DATA THRU	C98970
53850	END-OUTPUT-LINE-ISC-DATA.	C98970
53890	GO TO NEXT-HMC.	C98970
53900	RESET-HMC-LINE-ISC.	C98970
53910	MOVE ZERO TO CNT.	C98970
53920	RESET-HMC-LINE-2.	C98970
53930	ADD 1 TO CNT.	C98970
53940	MOVE ZERO TO HMC-ISC [CNT].	C98970
53950	IF CNT IS LESS THAN NO-WDC-COLS GO TO RESET-HMC-LINE-2.	C98970
53990	END-RESET-ISC. EXIT.	C98970
54000	ADD-NI.	C98970
54010	MOVE ONE TO NI-LINE-FLAG.	C98970
54020	ADD MA TO HMC-NI [POS-WDC].	C98970
54100	ADD-ISC.	C98970
54110	MOVE ONE TO ISC-LINE-FLAG.	C98970
54120	ADD MA TO HMC-ISC [POS-WDC].	C98970
55000	CLOSE-FILES.	C98970
55010	COMPUTE CNT = NO-REC-TAPE - NO-REC-TAPE / BF * BF.	C98970
55020	IF CNT IS EQUAL TO ZERO GO TO CF-3.	C98970
55030	CF-2.	C98970
55040	WRITE TAPE-FILE FROM NINE.	C98970
55050	ADD 1 TO CNT.	C98970
55060	IF CNT IS LESS THAN BF GO TO CF-2.	C98970
55140	CF-3.	C98970
55160	DISPLAY : NO TAPE RECS : NO-REC-TAPE UPON CONSOLE.	C98970
55165	DISPLAY : NO OF W.U.C. : NO-WUC UPON CONSOLE.	C98970
55190	DISPLAY : END OF JOB C9897 : UPON CONSOLE.	C98970
55200	CLOSE IN-FILE-DB.	C98970
55220	OUT-DATA.	C98970
55235	IN-FILE-ISC WITH LOCK.	C98970
55290	GORACK.	C98970
70000	READ-ISC-A-C.	C98970
70010	READ IN-FILE-ISC INTO NO-ISC A7 END GO TO END-RIAC.	C98970
70020	MOVE ZERO TO KNT.	C98970
70030	RIAC.	C98970
70040	ADD 1 TO KNT.	C98970
70050	READ IN-FILE-ISC INTO ISC-A-C A7 END GO TO END-RIAC.	C98970
70060	MOVE ISC-TN TO ISC-AC-TN [KNT].	C98970
70070	MOVE ISC-WK TO ISC-AC-WK [KNT].	C98970
70075	IF ISC-WK IS LESS THAN MIN-ISC-WEEK MOVE ISC-WK	C98970
70076	TO MIN-ISC-WEEK.	C98970
70080	IF KNT IS LESS THAN NO-ISC-AC GO TO RIAC.	C98970
70090	END-RIAC. EXIT.	C98970
70200	CHECK-ISC-IRONAL.	C98970
70210	IF SERIAL-NO IS NOT EQUAL TO PREV-TESTED-SN GO TO CHECK-I-2.	C98970
70220	IF ISC-FLAG IS EQUAL TO TWO GO TO END-CI.	C98970
70230	IF IS-IRONAL IS EQUAL TO ONE AND WEEK IS NOT LESS THAN	C98970
70232	MIN-ISC-WEEK, THEN GO TO END-CI.	C98970
70240	CHECK-I-2.	C98970
70250	MOVE TWO TO ISCHRONAL.	C98970
70260	IF WEEK IS LESS THAN MIN-ISC-WEEK GO TO END-CI.	C98970
70270	MOVE ZERO TO CNT.	C98970
70280	CHECK-I-1.	C98970
70290	ADD 1 TO CNT.	C98970
70300	MOVE ISC-AC-TN [CNT] TO ISC-TEMP.	C98970
70310	IF SERIAL-NO IS LESS THAN ISC-TEMP GO TO CHECK-I-4.	C98970
70320	IF SERIAL-NO IS EQUAL TO ISC-TEMP GO TO CHECK-I-1A.	C98970
70330	IF CNT IS LESS THAN NO-ISC-AC GO TO CHECK-I-1.	C98970
70340	CHECK-I-4.	C98970
70350	MOVE TWO TO ISC-FLAG.	C98970
70360	GO TO CHECK-I-3.	C98970
70370	CHECK-I-1A.	C98970
70380	MOVE ISC-AC-WK [CNT] TO WEEK-TEMP.	C98970
70390	IF WEEK-TEMP IS EQUAL TO WEEK OR WEEK IS GREATER THAN	C98970
70400	WEEK-TEMP MOVE ONE TO ISCHRONAL.	C98970
70410	MOVE ONE TO ISC-FLAG.	C98970

70430	CHECK-1-3.	C98970
70440	MOVE SERIAL-NO TO PREV-TESTED-SN.	C98970
70450	END-CI. EXIT.	C98970
80000	READ-IN-TITLE-DATA.	C98970
80010	MOVE ZERO TO CNT.	C98970
80020	READ-WDC-INPUT.	C98970
80030	READ IN-FILE-1SC INTO WDC-INPUT.	C98970
80040	AT END GO TO END-RITD.	C98970
80050	ADD 1 TO CNT.	C98970
80060	MOVE WDC-IN TO WDC-LIST (CNT).	C98970
80080	IF CNT IS LESS THAN 21 GO TO READ-WDC-INPUT.	C98970
80100	READ-UNSCHED-MAINT-COLS.	C98970
80110	READ IN-FILE-1SC INTO NUMBER-CARD.	C98970
80120	AT END GO TO END-RITD.	C98970
80130	MOVE NUMBER-ITEMS TO SUM-INDEX.	C98970
80140	MOVE ZERO TO CNT.	C98970
80150	READ-UNSCHED-COLS.	C98970
80160	READ IN-FILE-1SC INTO NUMBER-CARD.	C98970
80170	AT END GO TO END-RITD.	C98970
80180	ADD 1 TO CNT.	C98970
80190	MOVE NUMBER-ITEMS TO SUM-WDC-COL (CNT).	C98970
80200	IF CNT IS LESS THAN SUM-INDEX GO TO READ-UNSCHED-COLS.	C98970
80290	MOVE ZERO TO CNT.	C98970
80300	READ IN-FILE-1SC INTO NUMBER-CARD.	C98970
80310	AT END GO TO END-RITD.	C98970
80320	MOVE NUMBER-ITEMS TO NUMBER-SGWUC.	C98970
80330	READ-SGWUC-DATA.	C98970
80340	READ IN-FILE-1SC INTO NUMBER-CARD.	C98970
80350	AT END GO TO END-RITD.	C98970
80360	ADD 1 TO CNT.	C98970
80370	MOVE NUMBER-ITEMS TO COL-NO (CNT).	C98970
80380	MOVE INPUT-SG-CODE TO SG-WUC (CNT).	C98970
80390	IF CNT IS LESS THAN NUMBER-SGWUC GO TO READ-SGWUC-DATA.	C98970
80790	END-RITD. EXIT.	C98970
/* PLACE COBOL SOURCE BEFORE THIS CARD		
//CHG.	IFGIN	DJ *SPACE>[CYL:[1:1]]
00000	G-T TFG	WANG
010001	019999	REPLACE
TFG	DT01	11 0202080
34		
57000236	331	
57000237	331	
57000243	324	
57000244	331	
57002545	331	
58000776	324	
58000901	331	
59000002	331	
59000003	331	
59000005	331	
59000006	331	
59000010	331	
59000012	331	
59000015	331	
59000018	331	
59000019	331	
59000026	331	
59000030	331	
59000054	324	
59000057	324	
59000058	324	
59000059	324	
59000104	331	
59000105	331	
59000108	324	
59000110	324	
59000119	324	
59000141	324	
59000143	324	
59000144	324	
59000145	324	
59000147	324	
59000151	324	

1440 CDS  
C98970'T  
'T

59000158 - 324

A  
B  
C  
D  
E  
F  
G  
H  
J  
K  
N  
P  
R  
S  
T  
U  
V  
2  
4

9

1

2

3

4

5

6

15

19

20

2

10 03300

11 03400

\*END

/\* PLACE TFG DATA BEFORE THIS CARD  
//TPR.TU12 DO DISP>[OLD,KEEP],VOL>SER>+F1,UNIT>T+F1  
//TPR.TU22 DO DISP>[OLD,KEEP],VOL>SER>+F5,UNIT>T+F5  
//TPR.TPRIN DO \*.SPACE>[TRK,[1,1]]  
T/P DT01 1010080Z080  
T/P TU22 1010050Z050  
/\* PLACE T/P CONTROL CARDS BEFORE THIS CARD

T12

T22

## 6.15.2 UNSCHEDULED MANHOUR AND NORM HOUR

```
//T9897N JOB 01:1 G WANG :;PRTY>02;TYPRUN>HOLD
//C9897B EXEC P9655L,TIME>15,ACCT>035323007
//CHG.TU14 DO DISP>[PASS],UNIT>[T+F3,1,DEFER],DSN>+C.9897416, CT14 2
// VOL>SER>[+F3,A+F3,B+F3,C+F3,D+F3,E+F3,F+F3,G+F3,H+F3, CT14 2
// 1+F3,J+F3,K+F3,L+F3,M+F3,N+F3,O+F3,P+F3,Q+F3,R+F3,S+F3] T14 3
//CHG.TU22 DO DISP>[PASS],UNIT>[T+F5,1,DEFER],DSN>+E.9897432, CT22 1
// VOL>SER>[+F5,A+F5,B+F5,C+F5,D+F5,E+F5,F+F5,G+F5,H+F5, CT22 2
// 1+F5,J+F5,K+F5,L+F5,M+F5,N+F5,O+F5,P+F5,Q+F5,R+F5,S+F5] T22 3
//CHG.TU24 DO DISP>[PASS],UNIT>[T+F7,1,DEFER],DSN>+0.9897429, CT24 1
// VOL>SER>[+F7,A+F7,B+F7,C+F7,D+F7,E+F7,F+F7,G+F7,H+F7, CT24 2
// 1+F7,J+F7,K+F7,L+F7,M+F7,N+F7,O+F7,P+F7,Q+F7,R+F7,S+F7] T24 3
//CHG.INPUT DO *.SPACE>[CYL,[1,1]] 1440 CDS
00000 COMBINE COMPILE 0. WANG. C98970
01040 DATE-WRITTEN. 25 JULY 72. C98970
01050 REMARKS. C98970
01060 PHASE 11 PROGRAM C98970
01070 TASK 7-2A MANHOUR AND NORM DATA. C98970
02000 ENVIRONMENT DIVISION. C98970
02010 CONFIGURATION SECTION. C98970
02020 SOURCE-COMPUTER. IBM-360. C98970
02030 OBJECT-COMPUTER. IBM-360. C98970
02100 INPUT-OUTPUT SECTION. C98970
02110 FILE-CONTROL. C98970
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02120	SELECT IN-FILE-D-B	ASSIGN TO UT-S-TU16	C98970
02130	RESERVE 1 ALTERNATE AREA.		C98970
02140	SELECT IN-FILE-ISC	ASSIGN TO DA-S-DT01	C98970
02150	RESERVE 1 ALTERNATE AREA.		C98970
02160	SELECT MSG-FILE	ASSIGN TO DA-S-DT02	C98970
02170	RESERVE 1 ALTERNATE AREA.		C98970
02180	SELECT OUT-FILE-1	ASSIGN TO UT-S-TU24	C98970
02190	RESERVE 1 ALTERNATE AREA.		C98970
02200	SELECT OUT-FILE-2	ASSIGN TO UT-S-TU22	C98970
02210	RESERVE 1 ALTERNATE AREA.		C98970
10000	DATA DIVISION.		C98970
10010	FILE SECTION.		C98970
10100	FD IN-FILE-D-R		C98970
10120	RECORDING MODE IS F		C98970
10130	BLOCK CONTAINS 40 RECORDS		C98970
10140	RECORD CONTAINS 70	CHARACTERS	C98970
10150	LABEL RECORDS ARE OMITTED		C98970
10160	DATA RECORDS ARE IN-REC-D-B.		C98970
10200	01 IN-REC-D-H SYNC.		C98970
10210	02 FILLER	PICTURE X(70).	C98970
10220			C98970
11300	FD IN-FILE-ISC		C98970
11320	RECORDING MODE IS F		C98970
11330	BLOCK CONTAINS 20 RECORDS		C98970
11340	RECORD CONTAINS 80	CHARACTERS	C98970
11350	LABEL RECORDS ARE STANDARD		C98970
11360	DATA RECORDS ARE IN-REC-ISC.		C98970
11400	01 IN-REC-ISC SYNC.		C98970
11410	02 FILLER	PICTURE X(80).	C98970
12100	FD OUT-FILE-1		C98970
12120	RECORDING MODE IS F		C98970
12130	BLOCK CONTAINS 90 RECORDS		C98970
12140	RECORD CONTAINS 20	CHARACTERS	C98970
12150	LABEL RECORDS ARE OMITTED		C98970
12160	DATA RECORDS ARE OUT-REC-1.		C98970
12200	01 OUT-REC-1 SYNC.		C98970
12210	02 FILLER	PICTURE X(20).	C98970
13300	FD MSG-FILE		C98970
13320	RECORDING MODE IS F		C98970
13330	BLOCK CONTAINS 20 RECORDS		C98970
13340	RECORD CONTAINS 80	CHARACTERS	C98970
13350	LABEL RECORDS ARE STANDARD		C98970
13360	DATA RECORDS ARE MSG-REC.		C98970
13400	01 MSG-REC SYNC.		C98970
13410	02 FILLER	PICTURE X(80).	C98970
14100	FD OUT-FILE-2		C98970
14120	RECORDING MODE IS F		C98970
14130	BLOCK CONTAINS 90 RECORDS		C98970
14140	RECORD CONTAINS 20	CHARACTERS	C98970
14150	LABEL RECORDS ARE OMITTED		C98970
14160	DATA RECORDS ARE OUT-REC-2.		C98970
14200	01 OUT-REC-2 SYNC.		C98970
14210	02 FILLER	PICTURE X(20).	C98970
30000	WORKING-STORAGE SECTION.		C98970
30012	77 WUC-FLAG SYNC PICTURE X VALUE SPACE.		C98970
30015	77 FLT-FLAG SYNC PICTURE X VALUE SPACE.		C98970
30016	77 CUR-65 SYNC PICTURE X VALUE SPACE.		C98970
30017	77 DATA-65 SYNC PICTURE X VALUE SPACE.		C98970
30020	77 CURWEEK SYNC	PICTURE 999.	C98970
30030	77 CUR-SER-NO SYNC	PICTURE X(8).	C98970
30040	77 CUR-ISC SYNC	PICTURE X.	C98970
30050	77 KNT SYNC COMPUTATIONAL	PICTURE S999.	C98970
30060	77 WEEK-TEMP SYNC	PICTURE 999.	C98970
30070	77 DELTA-WEEK SYNC	PICTURE S999.	C98970
30080	77 DELTA-FLT-HRS SYNC	PICTURE S999999.	C98970
30090	77 CUR-FLT-HRS SYNC	PICTURE S999999.	C98970
30100	77 FLAG SYNC COMPUTATIONAL	PICTURE S999 VALUE ZERO.	C98970
30110	77 HMC-TEMP SYNC	PICTURE XXX.	C98970
30120	77 NO-HMC SYNC COMPUTATIONAL	PICTURE S999 VALUE <100.	C98970
30130	77 NO-REC-1 SYNC	PICTURE S9(7) VALUE ZERO.	C98970
30140	77 NO-REC-2 SYNC	PICTURE S9(7) VALUE ZERO.	C98970
30150	77 MAX-NO-HMC SYNC COMPUTATIONAL	PICTURE S999 VALUE ZERO.	C98970
30160			C98970
30170	77 CNT SYNC COMPUTATIONAL	PICTURE S999.	C98970
30380	77 ONE SYNC	PICTURE X VALUE 11.	C98970
30390	77 TWO SYNC	PICTURE X VALUE 12.	C98970
30391	77 THREE SYNC	PICTURE X VALUE 13.	C98970
30392	77 FOUR SYNC	PICTURE X VALUE 14.	C98970
30400	77 ISC-TEMP SYNC	PICTURE X(8) VALUE SPACE.	C98970
30410	77 PREV-TESTED-SN SYNC	PICTURE X(8) VALUE SPACE.	C98970
30420	77 ISC-FLAG SYNC	PICTURE X VALUE SPACE.	C98970
30430	77 MIN-ISC-WEEK SYNC COMPUTATIONAL	PICTURE S999 VALUE <999.	C98970
30500	77 CURWUC SYNC	PICTURE X(5).	C98970
30506	77 CUR-HMC SYNC	PICTURE XXX.	C98970
30510	77 ISCHRONAL SYNC	PICTURE X.	C98970



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S0200	PROC-11-1.	C98970
S0210	PERFORM CHECK-ISCHRONAL THRU END-CI.	C98970
S0220	MOVE ISCHRONAL TO CUR-ISC.	C98970
S0222	MOVE IDENT TO CUR-IO.	C98970
S0230	MOVE WUC TO CURWUC.	C98970
S0240	MOVE WEEK TO CURWEEK.	C98970
S0250	MOVE SERIAL-NO TO CUR-SER-NO.	C98970
S0251	MOVE FLT-HRS TO CUR-FLT-HRS.	C98970
S0252	MOVE TWO TO CUR-65.	C98970
S0253	IF NORM-HR LESS THAN ZERO MOVE ONE TO CUR-65.	C98970
S0260	INIT-SET.	C98970
S0270	MOVE ONE TO FLT-FLAG.	C98970
S0271	IF WUC EQUAL TO CI-PREFLT MOVE TWO TO FLT-FLAG.	C98970
S0272	IF WUC EQUAL TO CI-BPOST MOVE TWO TO FLT-FLAG.	C98970
S0273	IF WUC EQUAL TO CI-SHPOST MOVE TWO TO FLT-FLAG.	C98970
S0274	COMPUTE SUM-NORM > 0.	C98970
S0275	IF FLT-FLAG EQUAL TO ONE AND NORM-HR GREATER THAN ZERO	C98970
S0276	MOVE NORM-HR TO SUM-NORM.	C98970
S0280	MOVE MAN-HR TO SUM-MAN-HR.	C98970
S0290	ACC-SET.	C98970
S0300	READ IN-FILE-D-H INTO DATA-BANK-INPUT	C98970
S0310	AT END GO TO CLOSE-FILES.	C98970
S0315	PERFORM CHECK-ISCHRONAL THRU END-CI.	C98970
S0320	IF ISCHRONAL IS NOT EQUAL TO CUR-ISC GO TO SET-BREAK.	C98970
S0322	IF IDENT NOT EQUAL TO CUR-IO GO TO SET-BREAK.	C98970
S0330	IF WUC NOT EQUAL TO CURWUC GO TO SET-BREAK.	C98970
S0340	IF SERIAL-NO NOT EQUAL TO CUR-SER-NO GO TO SET-BREAK.	C98970
S0345	MOVE TWO TO DATA-65.	C98970
S0346	IF NORM-HR LESS THAN ZERO MOVE ONE TO DATA-65.	C98970
S0347	GO TO CHECK-TYPE.	C98970
S0348	NOT-SP-TYPE.	C98970
S0350	SUBTRACT CURWEEK FROM WEEK GIVING WEEK-TEMP.	C98970
S0360	IF WEEK-TEMP NOT EQUAL TO 1	C98970
S0370	GO TO INTERNAL-BREAK.	C98970
S0380	ADD MAN-HR TO SUM-MAN-HR.	C98970
S0385	MOVE ONE TO FLT-FLAG.	C98970
S0390	IF WUC EQUAL TO CI-PREFLT MOVE TWO TO FLT-FLAG.	C98970
S0400	IF WUC EQUAL TO CI-BPOST MOVE TWO TO FLT-FLAG.	C98970
S0410	IF WUC EQUAL TO CI-SHPOST MOVE TWO TO FLT-FLAG.	C98970
S0420	IF FLT-FLAG EQUAL TO ONE AND NORM-HR GREATER THAN ZERO	C98970
S0421	ADD NORM-HR TO SUM-NORM.	C98970
S0425	IF FLT-FLAG EQUAL TO TWO COMPUTE SUM-NORM > 0.	C98970
S0440	MOVE WEEK TO CURWEEK.	C98970
S0442	MOVE FLT-HRS TO CUR-FLT-HRS.	C98970
S0443	IF CUR-65 EQUAL TO TWO OR DATA-65 EQUAL TO TWO	C98970
S0444	MOVE TWO TO CUR-65.	C98970
S0446	MOVE IDENT TO CUR-ID.	C98970
S0450	GO TO ACC-SET.	C98970
S0460	SET-BREAK.	C98970
S0470	PERFORM WRITE-1 THRU END-WRITE-1.	C98970
S0472	COMPUTE SUM-NORM > 0.	C98970
S0474	COMPUTE SUM-MAN-HR > 0.	C98970
S0480	GO TO CHECK-DATA.	C98970
S0490	INTERNAL-BREAK.	C98970
S0500	PERFORM WRITE-1 THRU END-WRITE-1.	C98970
S0510	MOVE WEEK TO CURWEEK.	C98970
S0512	MOVE FLT-HRS TO CUR-FLT-HRS.	C98970
S0515	MOVE DATA-65 TO CUR-65.	C98970
S0516	MOVE IDENT TO CUR-ID.	C98970
S0520	GO TO INIT-SET.	C98970
S0530	NOTE WRITE NORM-HR AND MAN-HR TOTALS ON OUTPUT FILE.	C98970
S0540	WRITE-1.	C98970
S0660	END-WRITE-1. EXIT.	C98970
S1000	CHECK-TYPE.	C98970
S1010	MOVE ONE TO WUC-FLAG.	C98970
S1020	IF WUC EQUAL TO CI-HPF MOVE TWO TO WUC-FLAG.	C98970
S1030	IF WUC EQUAL TO CI-MA1-1 MOVE TWO TO WUC-FLAG.	C98970
S1040	IF WUC EQUAL TO CI-MA1-2 MOVE TWO TO WUC-FLAG.	C98970
S1050	IF WUC EQUAL TO CI-MA1-3 MOVE TWO TO WUC-FLAG.	C98970
S1060	IF WUC EQUAL TO CI-PER1 MOVE TWO TO WUC-FLAG.	C98970
S1070	IF WUC EQUAL TO CI-IRAN MOVE TWO TO WUC-FLAG.	C98970
S1080	IF WUC-FLAG EQUAL TO ONE GO TO NOT-SP-TYPE.	C98970
S1090	SUBTRACT CURWEEK FROM WEEK GIVING WEEK-TEMP.	C98970
S1100	SP-TYPE.	C98970
S1110	IF WUC LESS THAN CI-PER1 AND WEEK-TEMP GREATER THAN GAP-WK-1	C98970
S1111	GO TO INTERNAL-BREAK.	C98970
S1120	IF WUC GREATER THAN CI-MA1-3 AND WEEK-TEMP GREATER THAN	C98970
S1121	GAP-WK-2 GO TO INTERNAL-BREAK.	C98970
S1132	ADD MAN-HR TO SUM-MAN-HR.	C98970
S1134	IF NORM-HR GREATER THAN ZERO ADD NORM-HR TO SUM-NORM.	C98970
S1140	MOVE WEEK TO CURWEEK.	C98970
S1150	MOVE FLT-HRS TO CUR-FLT-HRS.	C98970
S1152	IF DATA-65 EQUAL TO TWO OR CUR-65 EQUAL TO TWO	C98970
S1153	MOVE TWO TO CUR-65.	C98970
S1154	MOVE IDENT TO CUR-ID.	C98970
S1160	GO TO ACC-SET.	C98970

55000	PROC-11-2A.	C98970
55010	PERFORM CHECK-ISCHRONAL THRU END-CI.	C98970
55020	MOVE ISCHRONAL TO CUR-ISC.	C98970
55030	MOVE WUC TO CURWUC.	C98970
55050	MOVE SERIAL-NO TO CUR-SER-NO.	C98970
55060	MOVE IDENT TO CUR-ID.	C98970
55070	PERFORM WRITE-2 THRU END-WRITE-2.	C98970
55072	MOVE WUC TO CUR-65.	C98970
55073	IF NORM-HR LESS THAN ZERO MOVE ONE TO CUR-65.	C98970
55075	SET-NEW.	C98970
55080	COMPUTE SUM-NORM > 0.	C98970
55081	IF NORM-HR GREATER THAN ZERO MOVE NORM-HR TO SUM-NORM.	C98970
55090	MOVE UNITS TO SUM-MA.	C98970
55092	IF UNITS EQUAL TO ZERO GO TO SET-FLAG.	C98970
55093	MOVE CURWUC TO WUC-OUT.	C98970
55094	MOVE CUR-ISC TO ISC-OUT.	C98970
55095	PERFORM WRITE-3 THRU END-WRITE-3.	C98970
55096	READ IN-FILE-D-B INTO DATA-BANK-INPUT AT END GO TO EOF-BRK.	C98970
55097	GO TO BREAK-1.	C98970
55100	SET-FLAG.	C98970
55130	READ IN-FILE-D-B INTO DATA-BANK-INPUT	C98970
55140	AT END GO TO EOF-BRK.	C98970
55150	PERFORM CHECK-ISCHRONAL THRU END-CI.	C98970
55160	IF IDENT EQUAL TO CUR-ID	C98970
55170	PERFORM WRITE-2 THRU END-WRITE-2.	C98970
55180	IF ISCHRONAL NOT EQUAL TO CUR-ISC GO TO BREAK-1.	C98970
55190	IF WUC NOT EQUAL TO CURWUC GO TO BREAK-1.	C98970
55200	IF SERIAL-NO NOT EQUAL TO CUR-SER-NO GO TO BREAK-1.	C98970
55210	IF IDENT NOT EQUAL TO CUR-ID GO TO BREAK-1.	C98970
55212	MOVE TWO TO DATA-65.	C98970
55213	IF NORM-HR LESS THAN ZERO MOVE ONE TO DATA-65.	C98970
55215	IF CUR-65 EQUAL TO TWO OR DATA-65 EQUAL TO TWO	C98970
55216	MOVE TWO TO CUR-65.	C98970
55220	IF NORM-HR GREATER THAN ZERO ADD NORM-HR TO SUM-NORM.	C98970
55230	ADD UNITS TO SUM-MA.	C98970
55231	IF UNITS NOT EQUAL TO ZERO GO TO INT-BREAK.	C98970
55232	GO TO SET-FLAG.	C98970
55240	INT-BREAK.	C98970
55250	MOVE CURWUC TO WUC-OUT.	C98970
55260	MOVE CUR-ISC TO ISC-OUT.	C98970
55270	PERFORM WRITE-3 THRU END-WRITE-3.	C98970
55280	COMPUTE SUM-NORM > 0.	C98970
55282	COMPUTE SUM-MA > 0.	C98970
55284	GO TO SET-FLAG.	C98970
55290	BREAK-1.	C98970
55322	COMPUTE SUM-NORM > 0.	C98970
55324	COMPUTE SUM-MA > 0.	C98970
55330	GO TO CHECK-DATA.	C98970
55390	WRITE-2.	C98970
55470	END-WRITE-2. EXIT.	C98970
55480	WRITE-3.	C98970
55482	IF CUR-65 EQUAL TO ONE GO TO END-WRITE-3.	C98970
55500	MOVE SPACE TO HMC-OUT.	C98970
55510	DIVIDE SUM-MA INTO SUM-NORM GIVING OBS.	C98970
55520	MOVE THREE TO DATA-TYPE.	C98970
55530	WRITE OUT-REC-2 FROM OUT-DATA.	C98970
55540	ADD 1 TO NO-REC-2.	C98970
55550	END-WRITE-3. EXIT.	C98970
55551	EOF-BRK.	C98970
55552	IF SUM-NORM EQUAL TO ZERO GO TO CLOSE-FILES.	C98970
55553	MOVE CURWUC TO WUC-OUT.	C98970
55554	MOVE CUR-ISC TO ISC-OUT.	C98970
55555	PERFORM WRITE-3 THRU END-WRITE-3.	C98970
55556	GO TO CLOSE-FILES.	C98970
55560	REMARK-2.	C98970
55570	NOTE COMPUTE RATIO OF MM TOTAL OVER MA TOTAL	C98970
55580	DATA BANK RECORD TYPE 4.	C98970
60000	PROC-11-2B.	C98970
60010	PERFORM CHECK-ISCHRONAL THRU END-CI.	C98970
60020	MOVE ISCHRONAL TO CUR-ISC.	C98970
60030	MOVE WUC TO CURWUC.	C98970
60050	MOVE SERIAL-NO TO CUR-SER-NO.	C98970
60060	MOVE IDENT TO CUR-ID.	C98970
60070	MOVE HMC TO CUR-HMC.	C98970
60080	SET-NEW-2.	C98970
60090	MOVE MAN-HR TO SUM-MAN-HR.	C98970
60100	MOVE UNITS TO SUM-MA.	C98970
60102	IF UNITS EQUAL TO ZERO GO TO SET-FLAG-2.	C98970
60103	PERFORM WRITE-4 THRU END-WRITE-4.	C98970
60104	READ IN-FILE-D-B INTO DATA-BANK-INPUT AT END GO TO EOF-BRK-2.	C98970
60105	GO TO BREAK-2.	C98970
60110	SET-FLAG-2.	C98970
60140	READ IN-FILE-D-B INTO DATA-BANK-INPUT	C98970
60150	AT END GO TO EOF-BRK-2.	C98970

60160	PERFORM CHECK-ISCHRONAL THRU END-C1.	C98970
60170	IF ISCHRONAL NOT EQUAL TO CUR-ISC GO TO BREAK-2.	C98970
60180	IF WUC NOT EQUAL TO CURWUC GO TO BREAK-2.	C98970
60190	IF SERIAL-NO NOT EQUAL TO CUR-SER-NO GO TO BREAK-2.	C98970
60200	IF IDENT NOT EQUAL TO CUR-ID GO TO BREAK-2.	C98970
60210	IF HMC NOT EQUAL TO CUR-HMC GO TO BREAK-2.	C98970
60220	ADD MAN-HR TO SUM-MAN-HR.	C98970
60230	ADD UNITS TO SUM-MA.	C98970
60231	IF UNITS NOT EQUAL TO ZERO GO TO INT-BREAK-2.	C98970
60232	GO TO SET-FLAG-2.	C98970
60240	INT-BREAK-2.	C98970
60250	PERFORM WRITE-4 THRU END-WRITE-4.	C98970
60260	COMPUTE SUM-MAN-HR > 0.	C98970
60262	COMPUTE SUM-MA > 0.	C98970
60264	GO TO SET-FLAG-2.	C98970
60270	BREAK-2.	C98970
60282	COMPUTE SUM-MAN-HR > 0.	C98970
60284	COMPUTE SUM-MA > 0.	C98970
60290	GO TO CHECK-DATA.	C98970
60330	WRITE-4.	C98970
60340	MOVE CURWUC TO WUC-OUT.	C98970
60350	MOVE CUR-ISC TO ISC-OUT.	C98970
60360	MOVE CUR-HMC TO HMC-OUT.	C98970
60370	IF SUM-MA EQUAL TO ZERO ADD 1 TO SUM-MA.	C98970
60380	DIVIDE SUM-MA INTO SUM-MAN-HR	C98970
60390	GIVING OBS.	C98970
60400	MOVE ONE TO DATA-TYPE.	C98970
60410	WRITE OUT-REC-1 FROM OUT-DATA.	C98970
60420	ADD 1 TO NO-REC-1.	C98970
60430	END-WRITE-4. EXIT.	C98970
60440	EOP-BRK-2.	C98970
60450	IF SUM-MAN-HR EQUAL TO ZERO GO TO CLOSE-FILES.	C98970
60460	PERFORM WRITE-4 THRU END-WRITE-4.	C98970
60470	GO TO CLOSE-FILES.	C98970
70000	READ-ISC-A-C.	C98970
70005	READ IN-FILE-ISC INTO SPEC-WUC AT END GO TO END-RIAC.	C98970
70010	READ IN-FILE-ISC INTO NO-ISC AT END GO TO END-RIAC.	C98970
70020	MOVE ZERO TO KNT.	C98970
70030	RIAC.	C98970
70040	ADD 1 TO KNT.	C98970
70050	READ IN-FILE-ISC INTO ISC-A-C AT END GO TO END-RIAC.	C98970
70060	MOVE ISC-TN TO ISC-AC-TN [KNT].	C98970
70070	MOVE ISC-WK TO ISC-AC-WK [KNT].	C98970
70075	IF ISC-WK IS LESS THAN MIN-ISC-WEEK MOVE ISC-WK	C98970
70076	TO MIN-ISC-WEEK.	C98970
70080	IF KNT IS LESS THAN NO-ISC-AC GO TO RIAC.	C98970
70085	CLOSE IN-FILE-ISC WITH LOCK.	C98970
70090	END-RIAC. EXIT.	C98970
70200	CHECK-ISCHRONAL.	C98970
70210	IF SERIAL-NO IS NOT EQUAL TO PREV-TESTED-SN GO TO CHECK-I-2.	C98970
70220	IF ISC-FLAG IS EQUAL TO TWO GO TO END-C1.	C98970
70230	IF ISCHRONAL IS EQUAL TO ONE AND WEEK IS NOT LESS THAN	C98970
70232	MIN-ISC-WEEK, THEN GO TO END-C1.	C98970
70240	CHECK-I-2.	C98970
70250	MOVE TWO TO ISCHRONAL.	C98970
70260	IF WEEK IS LESS THAN MIN-ISC-WEEK GO TO END-C1.	C98970
70270	MOVE ZERO TO CNT.	C98970
70280	CHECK-I-1.	C98970
70290	ADD 1 TO CNT.	C98970
70300	MOVE ISC-AC-TN [CNT] TO ISC-TEMP.	C98970
70310	IF SERIAL-NO IS LESS THAN ISC-TEMP GO TO CHECK-I-4.	C98970
70320	IF SERIAL-NO IS EQUAL TO ISC-TEMP GO TO CHECK-I-1A.	C98970
70330	IF CNT IS LESS THAN NO-ISC-AC GO TO CHECK-I-1.	C98970
70340	CHECK-I-4.	C98970
70350	MOVE TWO TO ISC-FLAG.	C98970
70360	GO TO CHECK-I-3.	C98970
70370	CHECK-I-1A.	C98970
70380	MOVE ISC-AC-WK [CNT] TO WEEK-TEMP.	C98970
70390	IF WEEK-TEMP IS EQUAL TO WEEK OR WEEK IS GREATER THAN	C98970
70400	WEEK-TEMP MOVE ONE TO ISCHRONAL.	C98970
70410	MOVE ONE TO ISC-FLAG.	C98970
70430	CHECK-I-3.	C98970
70440	MOVE SERIAL-NO TO PREV-TESTED-SN.	C98970
70450	END-C1. EXIT.	C98970
70510	NINE-FILL-2.	C98970
70520	WRITE OUT-REC-2 FROM NINE.	C98970
70530	ADD 1 TO KNT.	C98970
70540	IF KNT IS LESS THAN 90 GO TO NINE-FILL-2.	C98970
70550	N-F-2. EXIT.	C98970
70600	NINE-FILL-1.	C98970
70610	WRITE OUT-REC-1 FROM NINE.	C98970
70620	ADD 1 TO KNT.	C98970
70630	IF KNT IS LESS THAN 90 GO TO NINE-FILL-1.	C98970
70640	N-F-1. EXIT.	C98970



### 6.15.3 SORT UNSCHEDULED NORM HOUR

```
//T9897W JOB 01: G WANG : ,PTY>02, TYPRUN>HOLD
//C9897F EXEC P9622N, W>060, TIME>04, ACCT>D35323007
//CHG, SORT1N DD DISP>[ , KEEP], UNIT>[ A+FS, 2, DEFER], CT22/23 1
// DS, >E, 9897432, CT22 2
// VOL>SER>[ +F5, A+FS, B+FS, C+FS, D+FS, E+FS, F+FS, G+FS, H+FS, CT22 3
// I+FS, J+FS, K+FS, L+FS, M+FS, N+FS, O+FS, P+FS, Q+FS, R+FS, S+FS], CT22 4
// DCB>[LRECL>0020, BLKSIZE>1800], LABEL>[ , NSL, RETPD>099]
//CHG, SORTOUT DU DISP>[ , KEEP], UNIT>[ A+FS, 2, DEFER], DSN>+A, 9897430, CT12/13 1
// VOL>SER>[ +F1, A+FS, B+FS, C+FS, D+FS, E+FS, F+FS, G+FS, H+FS, CT12 2
// I+FS, J+FS, K+FS, L+FS, M+FS, N+FS, O+FS, P+FS, Q+FS, R+FS, S+FS], CT12 3
// DCB>[LRECL>0020, BLKSIZE>1800]
//CHG, SYSIN DU +, DCB>BLKSIZE>0080, SPACE>[TRK, [1, 1]]
SORT FIELDS>[017, 001, CH, A, 019, 001, CH, A, 001, 005, CH, A], SIZE>E0350000
MODS E15>[E15, 000, S, SORTLIB, N], E18>[E18, 024, SORTLIB, N]
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### 6.15.4 MEAN AND VARIANCE NORM HOUR

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//C9897C EXEC P9655L, TIME>30, ACCT>D35323007
//CHG, TU12 DU DISP>[ , PASS], UNIT>[ T+FS, 1, DEFER], DSN>+A, 9897430, CT12 1
// VOL>SER>[ +F1, A+FS, B+FS, C+FS, D+FS, E+FS, F+FS, G+FS, H+FS, CT12 2
// I+FS, J+FS, K+FS, L+FS, M+FS, N+FS, O+FS, P+FS, Q+FS, R+FS, S+FS], T12 3
//CHG, TU25 DU DISP>[ , PASS], UNIT>[ T+FS, 1, DEFER], DSN>+H, 9897431, CT25 1
// VOL>SER>[ +F8, A+FS, B+FS, C+FS, D+FS, E+FS, F+FS, G+FS, H+FS, CT25 2
// I+FS, J+FS, K+FS, L+FS, M+FS, N+FS, O+FS, P+FS, Q+FS, R+FS, S+FS], T25 3
//CHG, INPUT DU +, SPACE>[CYL, [1, 1]] 1440 CDS
00000 COMLINE COMPILE 0, WAN0. C98970
01040 DATE-WRITTL, 25 JULY 72. C98970
01050 REMARKS. C98970
01060 TASK7-28 MEAN, VARIANCE OF NORM/MA. C98970
02000 ENVIRONMENT DIVISION. C98970
02010 CONFIGURATI IN SECTION. C98970
02020 SOURCE-COMPUTER. IBM-360. C98970
02030 OBJECT-COMPUTER. IBM-360. C98970
02100 INPUT-OUTPUT SECTION. C98970
02110 FILE-CONTRO.. C98970
02120 SELECT IN-FILE ASSIGN TO UT-5-TU12 C98970
02130 RESERVE 1 ALTERNATE AREA. C98970
02140 SELECT HIST-FILE ASSIGN TO UT-5-TU25 C98970
02150 RESERVE 1 ALTERNATE AREA. C98970
10000 DATA DIVISION. C98970
10010 FILE SECTIO.. C98970
11100 FD IN-FILE C98970
11120 RECORDING MODE IS F C98970
11130 BLOCK CONTAINS 90 RECORDS C98970
11140 RECORD CONTAINS 20 CHARACTERS C98970
11150 LABEL RECORDS ARE OMITTED C98970
11160 DATA RECORDS ARE IN-REC. C98970
11170 01 IN-REC SYNC. C98970
11180 02 WUC PICTURE X(5). C98970
11182 02 FILLER PICTURE X(4). C98970
11183 02 OBS PICTURE S9(6). C98970
11184 02 OBS-1 REDEFINES OBS PICTURE S99999V9. C98970
11185 02 FILLER PICTURE X. C98970
11186 02 ISCHRONAL-NEW PICTURE X. C98970
11187 02 FILLER PICTURE X. C98970
11188 02 DAT-TYPE-NEW PICTURE X. C98970
11189 02 FILLER PICTURE X. C98970
12100 FD HIST-FILE C98970
12120 RECORDING MODE IS F C98970
12130 BLOCK CONTAINS 60 RECORDS C98970
12140 RECORD CONTAINS 60 CHARACTERS C98970
12150 LABEL RECORDS ARE OMITTED C98970
12160 DATA RECORDS ARE HIST-REC. C98970
12170 01 HIST-REC SYNC. C98970
12180 02 FILLER PICTURE X(50). C98970
30000 WORKING-STORAGE SECTION. C98970
30010 77 KNT SYNC PICTURE S9(5). C98970
30012 77 OBS-ISO SYNC PICTURE S9(5)V99999. C98970
30014 77 OBS-NI SYNC PICTURE S9(5)V99999. C98970
30020 01 FILLER SYNC. C98970
30030 02 FREQ-HIST-VALUE OCCURS 2000 TIMES PICTURE S9(5) C98970
30040 COMPUTATIONAL. C98970
30050 01 A PICTURE S9(5) COMPUTATIONAL. C98970
30060 01 NO-OF-HISTS SYNC PICTURE 99999 VALUE ZERO. C98970
30080 01 ONE SYNC PICTURE X VALUE 11. C98970
30091 01 TWO SYNC PICTURE X VALUE 121. C98970
30092 01 THREE SYNC PICTURE X VALUE 131. C98970
30093 01 FOUR SYNC PICTURE X VALUE 141. C98970
30094 01 FIVE SYNC PICTURE X VALUE 151. C98970
30095 01 CNT SYNC PICTURE S9(5) COMPUTATIONAL. C98970
30100 01 CUR-WUC-T SYNC. C98970
30110 02 FILLER PICTURE X(5) VALUE 1 WUC>1. C98970
30120 02 CUR-WUC PICTURE X(5). C98970
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30170	01	ISCHRONAL SYNC	PICTURE X.	C98970
30180	01	DATA-TYPE SYNC	PICTURE X.	C98970
30190	01	MINUS-ONE COMPUTATIONAL	PICTURE S999 VALUE -1 SYNC.	C98970
32000	01	REPORT-D SYNC.		C98970
32010	02	FILLER	PICTURE X(50) VALUE	C98970
32020		:9897860 TF7919-01 142-8 1 1/2		C98970
32030	02	FILLER	PICTURE X(50) VALUE SPACE.	C98970
32040	02	FILLER	PICTURE X(30) VALUE	C98970
32050		:	PI.	C98970
40000	01	MEAN COMPUTATIONAL SYNC	PICTURE S9(7)V99.	C98970
40010	01	VARIANCL COMPUTATIONAL SYNC	PICTURE S9(7)V99.	C98970
40020	01	TEMP-COMP-R	PICTURE S9(7)V99.	C98970
40300	01	MEAN-H COMPUTATIONAL SYNC	PICTURE S9(8)V99999 VALUE ZERO.	C98970
40310	01	VARIANCL-H COMPUTATIONAL SYNC	PICTURE S9(5)V99999	C98970
40315		VALUE ZERO.		C98970
40320	01	TEMP-COMP-R	SYNC PICTURE S9(5)V99999	C98970
40325		VALUE ZERO.		C98970
40330	01	HIST-NO-OF-OBS-H	SYNC PICTURE S9(5)V99999	C98970
40335		VALUE ZERO.		C98970
40400	01	MEAN-VARIANCE-LINE-H	SYNC.	C98970
40410	02	FILLER	PICTURE X(50) VALUE	C98970
40420		:		C98970
40430	02	FILLER	PICTURE X(16) VALUE	C98970
40440		:	MEAN>1.	C98970
40450	02	MEAN-RPT-B	PICTURE Z29.99999.	C98970
40460	02	FILLER	PICTURE X(28) VALUE	C98970
40470		:	VARIANCE >1.	C98970
40480	02	VARIANCE-RPT-B	PICTURE Z229.99999.	C98970
40490	02	FILLER	PICTURE X(16) VALUE	C98970
40500		:	PI.	C98970
47000	01	HIST-VALUE-MAX SYNC	PICTURE S9999V99 VALUE -9999.9.	C98970
47010	01	HIST-VALUE-MIN SYNC	PICTURE S9999V99 VALUE <9999.9.	C98970
47015	01	HIST-VALUE-MI SYNC	PICTURE S9999V99 VALUE <9999.9.	C98970
47020	01	HIST-NO-OF-OBS SYNC	PICTURE S9(5) VALUE ZERO.	C98970
47030	01	HIST-NO-OF-INTERVALS SYNC	PICTURE 999V99 VALUE 50.	C98970
47040	01	HIST-INPUT-VMAX-VMIN SYNC	PICTURE 9 VALUE ZERO.	C98970
47050	01	HIST-DIST SYNC	PICTURE X VALUE 11.	C98970
47060	01	HIST-INDEX SYNC COMPUTATIONAL		C98970
47070		:	PICTURE S999 VALUE ZERO.	C98970
47080	01	HIST-INDEX-2 SYNC COMPUTATIONAL		C98970
47090		:	PICTURE S999 VALUE ZERO.	C98970
47100	01	HIST-TEMP SYNC	PICTURE S99999V99 VALUE ZERO.	C98970
47110	01	HIST-INTERVAL-SIZE SYNC	PICTURE S999V99 VALUE ZERO	C98970
47120		COMPUTATIONAL.		C98970
47150	01	HIST-FLAG SYNC	PICTURE X VALUE 101.	C98970
47160	01	HIST-SCALE-VALUE SYNC COMPUTATIONAL		C98970
47170		:	PICTURE S999 VALUE <1.	C98970
47180	01	HIST-PERCENT SYNC	PICTURE S999V99 COMPUTATIONAL.	C98970
47190	01	HIST-CUM SYNC	PICTURE S999V99 COMPUTATIONAL.	C98970
47200	01	HIST-LINE SYNC COMPUTATIONAL		C98970
47210		:	PICTURE S999 VALUE ZERO.	C98970
47220	01	HIST-PAGE-FLAG SYNC	PICTURE S999 VALUE <75.	C98970
47230	01	HIST-LINE-CNT SYNC	PICTURE S999.	C98970
47300	01	HIST-ERR-1 SYNC	PICTURE X(10) VALUE	C98970
47310		ERROR NO 01.		C98970
47320	01	HIST-ERR-3 SYNC.		C98970
47330	02	FILLER	PICTURE X(5) VALUE 185 > 1.	C98970
47340	02	HIST-ERR-2	PICTURE S9(5) VALUE ZERO.	C98970
47350	01	HIST-ERR-4 SYNC	PICTURE X(10) VALUE	C98970
47360		ERROR MAX.		C98970
47370	01	HIST-ERR-5 SYNC	PICTURE X(10) VALUE	C98970
47380		-MIN BAD. 1.		C98970
47390	01	HIST-OUT-RANGE-VALUE SYNC	PICTURE S999 COMPUTATIONAL.	C98970
47500	01	FILLER SYNC.		C98970
47510	02	FILLER OCCURS 200 TIMES.		C98970
47530	03	HIST-TABLE	PICTURE S9(5) COMPUTATIONAL.	C98970
47540	03	HIST-UPPER-LIMIT	PICTURE S9999V99 COMPUTATIONAL.	C98970
47550	03	HIST-TABLE-SCALED	PICTURE S999V99 COMPUTATIONAL.	C98970
47560	01	HIST-NEW-PAGE SYNC.		C98970
47570	02	FILLER	PICTURE X VALUE 11.	C98970
47580	02	FILLER	PICTURE X(122) VALUE SPACE.	C98970
47582	02	FILLER	PICTURE X(5) VALUE 1PAGE 1.	C98970
47584	02	HIST-PAGE-NO	PICTURE 9.	C98970
47590	02	FILLER	PICTURE X VALUE 11.	C98970
47600	01	HIST-TITLE SYNC.		C98970
47610	02	FILLER	PICTURE X(3) VALUE 15 1.	C98970
47620	02	HIST-TITLE-1.		C98970
47621	03	FILLER	PICTURE X(10) VALUE SPACE.	C98970
47630	02	HIST-TITLE-2.		C98970
47631	03	FILLER	PICTURE X(10) VALUE SPACE.	C98970
47640	02	HIST-TITLE-3	PICTURE X(10) VALUE SPACE.	C98970
47650	02	HIST-TITLE-4	PICTURE X(10) VALUE SPACE.	C98970
47660	02	FILLER	PICTURE X(24) VALUE	C98970
47670		NO OF OBSERVATIONS >1.		C98970
47680	02	HIST-NO-OF-OBS-RPT	PICTURE Z2229.	C98970
47690	02	FILLER	PICTURE X(13) VALUE	C98970
47700		VALUE MAX > 1.		C98970
47710	02	HIST-VALUE-MAX-RPT	PICTURE ----.9.	C98970
47720	02	FILLER	PICTURE X(13) VALUE	C98970
47730		VALUE MIN > 1.		C98970
47740	02	HIST-VALUE-MIN-RPT	PICTURE ----.9.	C98970
47750	02	FILLER	PICTURE X(18) VALUE	C98970
47760		:	PI.	C98970



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47900 01 HIST-OUT-LINE SYNC. C98970
47910 02 FILLER PICTURE X(50) VALUE C98970
47920 ://-----I, C98970
47922 02 FILLER PICTURE X(80) VALUE C98970
47930 :----- C98970
47940 :-----I, C98970
47950 01 HIST-LABEL SYNC. C98970
47960 02 FILLER PICTURE X(50) VALUE C98970
47970 :// MIDPNT PCNT CUM FREQ 1...5...10...15...20... C98970
47974 02 FILLER PICTURE X(80) VALUE 1.. C98970
47980 - :25...30...35...40...45...50...55...60...65...70...75...80... C98970
47990 - :85...90...95...100... C98970
48000 01 HIST-LINE-OUT SYNC. C98970
48010 02 FILLER PICTURE X VALUE 1/1. C98970
48020 02 HIST-LINE-RPT PICTURE Z29. C98970
48030 02 FILLER PICTURE X VALUE SPACE. C98970
48040 02 HIST-MID-POINT-RPT PICTURE -----9. C98970
48060 02 HIST-PERCENT-RPT PICTURE Z29.9. C98970
48070 02 FILLER PICTURE X VALUE SPACE. C98970
48080 02 HIST-CUM-RPT PICTURE Z29.9. C98970
48100 02 HIST-FREQ-RPT PICTURE ZZZZ9. C98970
48110 02 FILLER PICTURE X VALUE SPACE. C98970
48120 02 HIST-POINT OCCURS 100 TIMES C98970
48130 PICTURE X. C98970
48140 02 FILLER PICTURE X VALUE 1#1. C98970
48150 01 HIST-OUT-RANGE-REC SYNC. C98970
48160 02 FILLER PICTURE X(35) VALUE C98970
48170 :// NUMBER OF OUT OF RANGE VALUES >1. C98970
48180 02 HIST-OUT-RANGE-RPT PICTURE Z29. C98970
48190 02 FILLER PICTURE X(91) VALUE SPACE. C98970
48191 02 FILLER PICTURE X VALUE 1#1. C98970
48200 01 HIST-SCALE-LINE SYNC. C98970
48210 02 FILLER PICTURE X(27) VALUE C98970
48220 :// SCALING FACTOR > 1. C98970
48230 02 HIST-SCALE-RPT PICTURE Z29. C98970
48240 02 FILLER PICTURE X(99) VALUE SPACE. C98970
48250 02 FILLER PICTURE X VALUE 1#1. C98970
48300 01 FILLER SYNC. C98970
48310 02 HIST-VALUE OCCURS 2000 TIMES C98970
48320 PICTURE S9999V9 COMPUTATIONAL. C98970
48400 01 TASK7-REC SYNC. C98970
48410 05 TASK7-ISO PICTURE X. C98970
48411 05 FILLER PICTURE X(9). C98970
48420 05 TASK7-ID PICTURE X(1) VALUE 131. C98970
48430 05 FILLER PICTURE X(1). C98970
48440 05 TASK7-WUC PICTURE X(5). C98970
48450 05 FILLER PICTURE X(5). C98970
48460 05 MEAN-RPT PICTURE S9(7)V9. C98970
48470 05 FILLER PICTURE X. C98970
48480 05 VARIANCE-RPT PICTURE S9(7)V9. C98970
48490 05 FILLER PICTURE X(10). C98970
48500 05 FILLER PICTURE X VALUE 1#1. C98970
50000 PROCEDURE DIVISION. C98970
50010 OPEN INPUT IN-FILE. C98970
50020 OPEN OUTPUT HIST-FILE. C98970
50030 MOVE 2000 TO CNT. C98970
50040 PERFORM RESET-TABLE THRU END-RST-TABLE. C98970
50050 READ IN-FILE. AT END GO TO CLOSE-FILES. C98970
50100 PARA-1. C98970
50110 MOVE 1 TO HIST-NO-OF-OBS. C98970
50120 MOVE WUC TO CUR-WUC. C98970
50140 MOVE UATA-TYPE-NEW TO DATA-TYPE. C98970
50150 MOVE ISCHRONAL-NEW TO ISCHRONAL. C98970
50160 IF DATA-TYPE IS EQUAL TO FIVE GO TO WEEKS-DATA ELSE GO TO C98970
50170 FLT-DATA. C98970
50200 READ1. C98970
50210 READ IN-FILE. AT END GO TO CLOSE-FILES. C98970
50220 IF UATA-TYPE-NEW IS EQUAL TO 191 GO TO CLOSE-FILES. C98970
50230 IF WUC IS NOT EQUAL TO CUR-WUC GO TO PARA-2. C98970
50250 ADD 1 TO HIST-NO-OF-OBS. C98970
50260 IF UATA-TYPE IS EQUAL TO FIVE GO TO WEEKS-DATA ELSE GO TO C98970
50270 FLT-DATA. C98970
50300 PARA-2. C98970
50310 PERFORM SET-HISTO0 THRU END-SH. C98970
50320 PERFORM RESET-TABLE THRU END-RST-TABLE. C98970
50330 GO TO PARA-1. C98970
50400 RESET-TABLE. C98970
50410 MOVE ZERO TO CNT. C98970
50420 RST. C98970
50430 ADD 1 TO CNT. C98970
50440 MOVE MINUS-ONE TO HIST-VALUE (CNT). C98970
50445 MOVE ZERO TO FREQ-HIST-VALUE (CNT). C98970
50450 IF CNT IS LESS THAN KNT GO TO RST. C98970
50455 MOVE ZERO TO KNT. C98970
50460 END-RST-TABLE. EXIT. C98970

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50510 SET-HISTOG. C98970
50590 PERFORM WRITE-HISTOGRAM THRU END-HIST. C98970
50600 IF HIST-FLAG IS EQUAL TO 11 THEN GO TO CF1. C98970
50610 ADD 1 TO NO-OF-HISTS. C98970
50620 END-SH, EXIT. C98970
51000 WEEKS-DATA. C98970
51010 MOVE ZERO TO CNT. C98970
51020 WEEK-A. C98970
51030 ADD 1 TO CNT. C98970
51040 IF OBS IS EQUAL TO HIST-VALUE [CNT] GO TO WEEK-C. C98970
51050 IF FREQ-HIST-VALUE [CNT] IS EQUAL TO ZERO GO TO WEEK-B. C98970
51060 IF CNT IS LESS THAN 2000 GO TO WEEK-A. C98970
51070 DISPLAY : MORE THAN 2000 FREQUENCY OCCURENCES : UPON CONSOLE. C98970
51080 GO TO CF1. C98970
51090 WEEK-B. C98970
51100 MOVE OBS TO HIST-VALUE [CNT]. C98970
51110 IF CNT IS GREATER THAN KNT THEN MOVE CNT TO KNT. C98970
51120 WEEK-C. C98970
51130 ADD 1 TO FREQ-HIST-VALUE [CNT]. C98970
51140 GO TO READ1. C98970
52000 FLT-DATA. C98970
52010 MOVE [LND] TO CNT. C98970
52020 FLT-A. C98970
52030 ADD 1 TO CNT. C98970
52040 IF OBS-1 IS EQUAL TO HIST-VALUE [CNT] GO TO FLT-C. C98970
52050 IF FREQ-HIST-VALUE [CNT] IS EQUAL TO ZERO GO TO FLT-B. C98970
52060 IF CNT IS LESS THAN 2000 GO TO FLT-A. C98970
52070 DISPLAY : MORE THAN 2000 FREQUENCY OCCURENCES : UPON CONSOLE. C98970
52080 GO TO CF1. C98970
52090 FLT-B. C98970
52100 MOVE OBS-1 TO HIST-VALUE [CNT]. C98970
52110 IF CNT IS GREATER THAN KNT THEN MOVE CNT TO KNT. C98970
52120 FLT-C. C98970
52130 ADD 1 TO FREQ-HIST-VALUE [CNT]. C98970
52140 GO TO READ1. C98970
52200 CLOSE-FILES. C98970
52205 PERFORM SET-HISTOG THRU END-SH. C98970
52207 CF1. C98970
52210 CLOSE IN-FILE. HIST-FILE. C98970
52211 IF HIST-FLAG IS EQUAL TO 11: DISPLAY : HIST ERROR : UPON C98970
52212 CONSOLE. C98970
52215 DISPLAY : NO OF HISTOGRAMS > : NO-OF-HISTS UPON CONSOLE. C98970
52220 DISPLAY : E0J C9897 : UPON CONSOLE. C98970
52230 GOBACK. C98970
95000 COMPUTE-MEAN-VARIANCE. C98970
95005 IF HIST-NO-OF-OBS EQUAL TO 1 GO TO CMV-3. C98970
95010 MOVE ZERO TO CNT. C98970
95020 MOVE ZERO TO MEAN. C98970
95030 CMV-1. C98970
95040 ADD 1 TO CNT. C98970
95050 COMPUTE TEMP-COMP > HIST-VALUE [CNT] * FREQ-HIST-VALUE [CNT]. C98970
95060 ADD TEMP-COMP TO MEAN. C98970
95070 IF CNT IS LESS THAN KNT GO TO CMV-1. C98970
95080 DIVIDE HIST-NO-OF-OBS INTO MEAN. C98970
95090 MOVE ZERO TO CNT. C98970
95100 MOVE ZERO TO VARIANCE. C98970
95110 CMV-2. C98970
95120 ADD 1 TO CNT. C98970
95130 COMPUTE TEMP-COMP > [(HIST-VALUE [CNT] - MEAN) ** 2] * C98970
95140 FREQ-HIST-VALUE [CNT]. C98970
95150 ADD TEMP-COMP TO VARIANCE. C98970
95160 IF CNT IS LESS THAN KNT GO TO CMV-2. C98970
95170 COMPUTE VARIANCE > VARIANCE / (HIST-NO-OF-OBS - 1). C98970
95180 MOVE MEAN TO MEAN-RPT. C98970
95190 MOVE VARIANCE TO VARIANCE-RPT. C98970
95191 GO TO CMV-4. C98970
95192 CMV-3. C98970
95193 MOVE ZERO TO VARIANCE-RPT. C98970
95194 MOVE HIST-VALUE [1] TO MEAN-RPT. C98970
95195 CMV-4. C98970
95290 END-CMV. EXIT. C98970
97000 WRITE-HISTOGRAM. C98970
97351 PERFORM COMPUTE-MEAN-VARIANCE C98970
97352 THRU END-CMV. C98970
97356 MOVE CMV-MUC TO TASK7-MUC. C98970
97358 MOVE ISCHRONAL TO TASK7-ISO. C98970
97360 WRITE HIST-REC FROM TASK7-REC. C98970
99990 END-HIST. EXIT. C98970
/* PLACE COBOL SOURCE BEFORE C98970
//CH0.TF0IN DD *,SPACE*(CYL,(1,1)) 1440 CDS
/* PLACE TFO DATA BEFORE THIS CARD
//TPR.TU12 DD DISP*(OLD,KEEP),VOL*(SER)*P1,UNIT)*T+P1 T12
//TPR.TU25 DD DISP*(OLD,KEEP),VOL*(SER)*P8,UNIT)*T+P8 T25
//TPR.TPHIN DD *,SPACE*(TRK,(1,1))
T/P TU12 10100202020
T/P TU25 10100502050
/* PLACE T/P CONTROL CARDS BEFORE THIS CARD
//T9897N JOB 01: 0 WANG 1:PRTY02,TPRUN)HOLD

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## 6.15.5 SORT UNSCHEDULED MANHOUR

```
//C9897F EXEC P902N,WD060,TIME>04,ACCT>D35323007
//CHG.SORTIN DU DISP>[KEEP],UNIT>[A+F5,2,DEFER], CT22/23 1
// DSN>+E,9897429, CT22 2
// VOL>SER>[+F5,A+F5,B+F5,C+F5,D+F5,E+F5,F+F5,G+F5,H+F5, CT22 3
// I+F5,J+F5,K+F5,L+F5,M+F5,N+F5,O+F5,P+F5,Q+F5,R+F5,S+F5],CT22 4
// DCB>[LRECL>0020,BLKSIZE>1800],LABEL>[C,NSL,RETPD>099]
//CHG.SORTOUT DU DISP>[KEEP],UNIT>[A+F1,2,DEFER],DSN>+A,9897430, CT12/13 1
// VOL>SER>[+F1,A+F1,B+F1,C+F1,D+F1,E+F1,F+F1,G+F1,H+F1, CT12 2
// I+F1,J+F1,K+F1,L+F1,M+F1,N+F1,O+F1,P+F1,Q+F1,R+F1,S+F1],CT12 3
// DCB>[LRECL>0020,BLKSIZE>1800]
//CHG.SYSIN DU *DCB>BLKSIZE>0080,SPACE>[TRK,1,1]
SORT FIELDS>[017,001,CH,A,019,001,CH,A,001,005,CH,A,006,003,CH,A,] C
SIZE>E0250000
MODS E15>[E15,008,SORTLIB,N],E18>[E18,024,SORTLIB,N]
```

## 6.15.6 MEAN AND VARIANCE OF UNSCHEDULED MANHOUR

```
//C9897H EXEC P905L,TIME>16,ACCT>D35323007
//CHG.TU12 DU DISP>[PASS],UNIT>[T+F1,1,DEFER],DSN>+A,9897430, CT12 1
// VOL>SER>[+F1,A+F1,B+F1,C+F1,D+F1,E+F1,F+F1,G+F1,H+F1, CT12 2
// J+F1,K+F1,L+F1,M+F1,N+F1,O+F1,P+F1,Q+F1,R+F1,S+F1] T12
//CHG.TU25 DU DISP>[PASS],UNIT>[T+F8,1,DEFER],DSN>+H,9897431, CT25 1
// VOL>SER>[+F8,A+F8,B+F8,C+F8,D+F8,E+F8,F+F8,G+F8,H+F8, CT25 2
// I+F8,J+F8,K+F8,L+F8,M+F8,N+F8,O+F8,P+F8,Q+F8,R+F8,S+F8] T25 3
//CHG.INPUT DU *SPACE>[CYL,1,1] 1440 CDS
00000 COMBINE COMPILE G. WAN0. C98970
01040 DATE-WRITTEN. 26 JULY 72. C98970
01050 REMARKS. C98970
01060 TASK 7-2C MEAN VARIANCE OF MANHOURS/MA. C98970
02000 ENVIRONMENT DIVISION. C98970
02010 CONFIGURATION SECTION. C98970
02020 SOURCE-COMPUTER. IBM-360. C98970
02030 OBJECT-COMPUTER. IBM-360. C98970
02100 INPUT-OUTPUT SECTION. C98970
02110 FILE-CONTROL. C98970
02120 SELECT IN-FILE ASSIGN TO UT-S-TU12 C98970
02130 RESERVE 1 ALTERNATE AREA. C98970
02140 SELECT HIST-FILE ASSIGN TO UT-S-TU25 C98970
02150 RESERVE 1 ALTERNATE AREA. C98970
10000 DATA DIVISION. C98970
10010 FILE SECTION. C98970
11000 FD IN-FILE C98970
11120 RECORDING MODE IS F C98970
11130 BLOCK CONTAINS 90 RECORDS C98970
11140 RECORD CONTAINS 20 CHARACTERS C98970
11150 LABEL RECORDS ARE OMITTED C98970
11160 DATA RECORDS ARE IN-REC. C98970
11170 01 IN-REC SYNC. C98970
11180 02 WUC PICTURE X(5). C98970
11181 02 MMC PICTURE X(3). C98970
11182 02 FILLER PICTURE X. C98970
11183 02 OBS PICTURE S9(6). C98970
11184 02 OBS-1 REDEFINES OBS PICTURE S99999V9. C98970
11185 02 FILLER PICTURE X. C98970
11186 02 ISCHRONAL-NEW PICTURE X. C98970
11187 02 FILLER PICTURE X. C98970
11188 02 DATA-TYPE-NEW PICTURE X. C98970
11189 02 FILLER PICTURE X. C98970
12100 FD HIST-FILE C98970
12120 RECORDING MODE IS F C98970
12130 BLOCK CONTAINS 60 RECORDS C98970
12140 RECORD CONTAINS 50 CHARACTERS C98970
12150 LABEL RECORDS ARE OMITTED C98970
12160 DATA RECORDS ARE HIST-REC. C98970
12170 01 HIST-REC SYNC. C98970
12180 02 FILLER PICTURE X(50). C98970
30000 WORKING-STORAGE SECTION. C98970
30010 77 KNT SYNC PICTURE S9(5). C98970
30020 01 FILLER SYNC. C98970
30030 02 FRE-HIST-VALUE OCCURS 1000 TIMES PICTURE S9(5) C98970
30040 COMPUTATIONAL. C98970
30050 01 A PICTURE S9(5) COMPUTATIONAL. C98970
30060 01 NO-OF-HISTS SYNC PICTURE 9999 VALUE ZERO. C98970
30080 01 ONE SYNC PICTURE X VALUE 111. C98970
30082 01 TWO SYNC PICTURE X VALUE 121. C98970
30090 01 CNT SYNC PICTURE S9(5) COMPUTATIONAL. C98970
30100 01 CUR-WUC-T SYNC. C98970
30110 02 FILLER PICTURE X(5) VALUE 1 WUC>1. C98970
30120 02 CUR-WUC PICTURE X(5). C98970
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30130	01	CUR-HMC-T SYNC.		C98970
30140	02	FILLER	PICTURE X(5) VALUE 1 HMC>1.	C98970
30150	02	CUR-HMC	PICTURE X(3).	C98970
30160	02	FILLER	PICTURE XX VALUE SPACE.	C98970
30170	01	ISCHRONAL SYNC	PICTURE X.	C98970
30180	01	DATA-TYPE SYNC	PICTURE X.	C98970
30190	01	MINUS-ONE COMPUTATIONAL	PICTURE S999 VALUE -1 SYNC.	C98970
32000	01	REPORT-ID SYNC.		C98970
32010	02	FILLER	PICTURE X(50) VALUE	C98970
32020		:S9897B60 TF7919-01 142-B I 1/2		C98970
32030	02	FILLER	PICTURE X(50) VALUE SPACE.	C98970
32040	02	FILLER	PICTURE X(30) VALUE	C98970
32050		:		C98970
46000	01	MEAN COMPUTATIONAL SYNC	PICTURE S9(7)V99.	C98970
46010	01	VARIANCE COMPUTATIONAL SYNC	PICTURE S9(7)V99.	C98970
46020	01	TEMP-COMP	PICTURE S9(7)V99.	C98970
47000	01	HIST-VALUE-MAX SYNC	PICTURE S999V99 VALUE -9999.9.	C98970
47010	01	HIST-VALUE-MIN SYNC	PICTURE S999V99 VALUE <9999.9.	C98970
47015	01	HIST-VALUE-MI SYNC	PICTURE S999V99 VALUE <9999.9.	C98970
47020	01	HIST-NO-OF-OBS SYNC	PICTURE S9(5) VALUE ZERO.	C98970
47030	01	HIST-NO-OF-INTERVALS SYNC	PICTURE 999V99 VALUE 50.	C98970
47040	01	HIST-INPUT-VMAX-VMIN SYNC	PICTURE 9 VALUE ZERO.	C98970
47050	01	HIST-DIST SYNC	PICTURE X VALUE 11.	C98970
47060	01	HIST-INDEX SYNC COMPUTATIONAL		C98970
47070			PICTURE S999 VALUE ZERO.	C98970
47080	01	HIST-INDEX-2 SYNC COMPUTATIONAL		C98970
47090			PICTURE S999 VALUE ZERO.	C98970
47100	01	HIST-TEMP SYNC	PICTURE S999V99 VALUE ZERO.	C98970
47110	01	HIST-INTERVAL-SIZE SYNC	PICTURE S999V99 VALUE ZERO	C98970
47120		COMPUTATIONAL.		C98970
47150	01	HIST-FLAG SYNC	PICTURE X VALUE 101.	C98970
47160	01	HIST-SCALE-VALUE SYNC COMPUTATIONAL		C98970
47170			PICTURE S999 VALUE <1.	C98970
47180	01	HIST-PERCENT SYNC	PICTURE S999V99 COMPUTATIONAL.	C98970
47190	01	HIST-CUM SYNC	PICTURE S999V99 COMPUTATIONAL.	C98970
47200	01	HIST-LINE SYNC COMPUTATIONAL		C98970
47210			PICTURE S999 VALUE ZERO.	C98970
47220	01	HIST-PAGE-FLAG SYNC	PICTURE S999 VALUE <7b.	C98970
47230	01	HIST-LINE-CNT SYNC	PICTURE S999.	C98970
47300	01	HIST-ERR-1 SYNC	PICTURE X(10) VALUE	C98970
47310		ERROR NO 01.		C98970
47320	01	HIST-ERR-3 SYNC.		C98970
47330	02	FILLER	PICTURE X(5) VALUE 1BS > 1.	C98970
47340	02	HIS-ERR-2	PICTURE S9(5) VALUE ZERO.	C98970
47350	01	HIST-ERR-4 SYNC	PICTURE X(10) VALUE	C98970
47360		ERROR MAX1.		C98970
47370	01	HIST-ERR-5 SYNC	PICTURE X(10) VALUE	C98970
47380		1-MIN BAD. 1.		C98970
47390	01	HIST-OUI-RANGE-VALUE SYNC	PICTURE S999 COMPUTATIONAL.	C98970
47500	01	FILLER SYNC.		C98970
47510	02	FILLER OCCURS 200 TIMES.		C98970
47530	03	HIST-TABLE	PICTURE S9(5) COMPUTATIONAL.	C98970
47540	03	HIST-UPPER-LIMIT	PICTURE S999V99 COMPUTATIONAL.	C98970
47550	03	HIST-TABLE-SCALED	PICTURE S999V99 COMPUTATIONAL.	C98970
47560	01	HIST-NAME-PAGE SYNC.		C98970
47570	02	FILLER	PICTURE X VALUE 111.	C98970
47580	02	FILLER	PICTURE X(122) VALUE SPACE.	C98970
47582	02	FILLER	PICTURE X(5) VALUE 1PAGE 1.	C98970
47584	02	HIST-PAGE-NO	PICTURE 9.	C98970
47590	02	FILLER	PICTURE X VALUE 111.	C98970
47600	01	HIST-TITLE SYNC.		C98970
47610	02	FILLER	PICTURE X(3) VALUE 1S 1.	C98970
47620	02	HIST-TITLE-1.		C98970
47621	03	FILLER	PICTURE X(10) VALUE SPACE.	C98970
47630	02	HIST-TITLE-2.		C98970
47631	03	FILLER	PICTURE X(10) VALUE SPACE.	C98970
47640	02	HIST-TITLE-3	PICTURE X(10) VALUE SPACE.	C98970
47650	02	HIST-TITLE-4	PICTURE X(10) VALUE SPACE.	C98970
47660	02	FILLER	PICTURE X(24) VALUE	C98970
47670		NO OF OBSERVATIONS >1.		C98970
47680	02	HIST-NO-OF-OBS-RPT	PICTURE ZZZZ9.	C98970
47690	02	FILLER	PICTURE X(13) VALUE	C98970
47700		1 VALUE MAX > 1.		C98970
47710	02	HIST-VALUE-MAX-RPT	PICTURE ----.9.	C98970
47720	02	FILLER	PICTURE X(13) VALUE	C98970
47730		1 VALUE MIN > 1.		C98970
47740	02	HIST-VALUE-MIN-RPT	PICTURE ----.9.	C98970
47750	02	FILLER	PICTURE X(18) VALUE	C98970
47760		1.		C98970
47900	01	HIST-UVI-LINE SYNC.		C98970
47910	02	FILLER	PICTURE X(50) VALUE	C98970
47920		1-----1.		C98970
47922	02	FILLER	PICTURE X(80) VALUE	C98970
47930		1-----1.		C98970
47940	-	1-----1.		C98970

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47950 01 HIST-LABEL SYNC. C98970
47960 02 FILLER PICTURE X(50) VALUE C98970
47970 1/ MIOPNT PCNT CUM FREQ 1...5...10...15...20.1. C98970
47974 02 FILLER PICTURE X(80) VALUE 1.. C98970
47980 - 125...30...35...40...45...50...55...60...65...70...75...80... C98970
47990 - 185...90...95...100... C98970
48000 01 HIST-LINE-OUT SYNC. C98970
48010 02 FILLER PICTURE X VALUE 1/1. C98970
48020 02 HIST-LINE-RPT PICTURE ZZ9. C98970
48030 02 FILLER PICTURE X VALUE SPACE. C98970
48040 02 HIST-MID-POINT-RPT PICTURE ----.9. C98970
48060 02 HIST-PERCENT-RPT PICTURE ZZ9.9. C98970
48070 02 FILLER PICTURE X VALUE SPACE. C98970
48080 02 HIST-CUM-RPT PICTURE ZZ9.9. C98970
48100 02 HIST-FREQ-RPT PICTURE ZZZ9. C98970
48110 02 FILLER PICTURE X VALUE SPACE. C98970
48120 02 HIST-POINT OCCURS 100 TIMES C98970
48130 PICTURE X. C98970
48140 02 FILLER PICTURE X VALUE 1#1. C98970
48150 01 HIST-OUT-RANGE-REC SYNC. C98970
48160 02 FILLER PICTURE X(35) VALUE C98970
48170 1/ NUMBER OF OUT OF RANGE VALUES >1. C98970
48180 02 HIST-OUT-RANGE-RPT PICTURE ZZ9. C98970
48190 02 FILLER PICTURE X(91) VALUE SPACE. C98970
48191 02 FILLER PICTURE X VALUE 1#1. C98970
48200 01 HIST-SCALE-LINE SYNC. C98970
48210 02 FILLER PICTURE X(27) VALUE C98970
48220 1/ SCALING FACTOR > 1. C98970
48230 02 HIST-SCALE-RPT PICTURE ZZ9. C98970
48240 02 FILLER PICTURE X(99) VALUE SPACE. C98970
48250 02 FILLER PICTURE X VALUE 1#1. C98970
48300 01 FILLER SYNC. C98970
48310 02 HIST-VALUE OCCURS 1000 TIMES C98970
48320 PICTURE S9999V9 COMPUTATIONAL. C98970
48400 01 TASK7-REC SYNC. C98970
48410 05 TASK7-ISO PICTURE X. C98970
48411 05 FILLER PICTURE X(9). C98970
48420 05 TASK7-ID PICTURE X(1) VALUE 121. C98970
48430 05 FILLER PICTURE X(1). C98970
48440 05 TASK7-WUC PICTURE X(5). C98970
48450 05 FILLER PICTURE X. C98970
48451 05 TASK7-HMC PICTURE X(3). C98970
48452 05 FILLER PICTURE X. C98970
48460 05 MEAN-RPT PICTURE S9(7)V9. C98970
48470 05 FILLER PICTURE X. C98970
48480 05 VARIANCE-RPT PICTURE S9(7)V9. C98970
48490 05 FILLER PICTURE X(10). C98970
48500 05 FILLER PICTURE X VALUE 1#1. C98970
50000 PROCEDURE DIVISION. C98970
50010 OPEN INPUT IN-FILE. C98970
50020 OPEN OUTPUT HIST-FILE. C98970
50030 MOVE 1010 TO KNT. C98970
50040 PERFORM RESET-TABLE THRU END-RST-TABLE. C98970
50050 READ IN-FILE, AT END GO TO CLOSE-FILES. C98970
50100 PARA-1. C98970
50110 MOVE 1 TO HIST-NO-OF-OBS. C98970
50120 MOVE WUC TO CUR-WUC. C98970
50130 MOVE HMC TO CUR-HMC. C98970
50140 MOVE DATA-TYPE-NEW TO DATA-TYPE. C98970
50150 MOVE ISCHRONAL-NEW TO ISCHRONAL. C98970
50160 IF DATA-TYPE NOT EQUAL TO ONE GO TO WEEKS-DATA ELSE GO TO C98970
50170 FLT-DATA. C98970
50200 READ1. C98970
50210 READ IN-FILE, AT END GO TO CLOSE-FILES. C98970
50220 IF DATA-TYPE-NEW IS EQUAL TO 191 GO TO CLOSE-FILES. C98970
50230 IF WUC IS NOT EQUAL TO CUR-WUC GO TO PARA-2. C98970
50240 IF HMC IS NOT EQUAL TO CUR-HMC GO TO PARA-2. C98970
50250 ADD 1 TO HIST-NO-OF-OBS. C98970
50260 IF DATA-TYPE NOT EQUAL TO ONE GO TO WEEKS-DATA ELSE GO TO C98970
50270 FLT-DATA. C98970
50300 PARA-2. C98970
50310 PERFORM SET-HISTOGR THRU END-SH. C98970
50320 PERFORM RESET-TABLE THRU END-RST-TABLE. C98970
50330 GO TO PARA-1. C98970
50400 RESET-TABLE. C98970
50410 MOVE ZERO TO CNT. C98970
50420 RST. C98970
50430 ADD 1 TO CNT. C98970
50440 MOVE MINUS-ONE TO HIST-VALUE [CNT]. C98970
50445 MOVE ZERO TO FREQ-HIST-VALUE [CNT]. C98970
50450 IF CNT IS LESS THAN KNT GO TO RST. C98970
50455 MOVE ZERO TO KNT. C98970
50460 END-RST-TABLE. EXIT. C98970

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50510 SET-HISTOG. C98970
50590 PERFORM WRITE-HISTOGRAM THRU END-HIST. C98970
50600 IF HIST-FLAG IS EQUAL TO 11 THEN GO TO CF1. C98970
50610 ADD 1 TO NO-OF-HISTS. C98970
50620 END-SH. EXIT. C98970
51000 WEEKS-DATA. C98970
51010 MOVE ZERO TO CNT. C98970
51020 WEEK-A. C98970
51030 ADD 1 TO CNT. C98970
51040 IF OBS IS EQUAL TO HIST-VALUE [CNT] GO TO WEEK-C. C98970
51050 IF FREQ-HIST-VALUE [CNT] IS EQUAL TO ZERO GO TO WEEK-B. C98970
51060 IF CNT IS LESS THAN 1000 GO TO WEEK-A. C98970
51070 DISPLAY : MORE THAN 1000 FREQUENCY OCCURENCES : UPON CONSOLE. C98970
51080 GO TO CF1. C98970
51090 WEEK-B. C98970
51100 MOVE OBS TO HIST-VALUE [CNT]. C98970
51110 IF CNT IS GREATER THAN KNT THEN MOVE CNT TO KNT. C98970
51120 WEEK-C. C98970
51130 ADD 1 TO FREQ-HIST-VALUE [CNT]. C98970
51140 GO TO HEAD1. C98970
52000 FLT-DATA. C98970
52010 MOVE ZERO TO CNT. C98970
52020 FLT-A. C98970
52030 ADD 1 TO CNT. C98970
52040 IF OBS-1 IS EQUAL TO HIST-VALUE [CNT] GO TO FLT-C. C98970
52050 IF FREQ-HIST-VALUE [CNT] IS EQUAL TO ZERO GO TO FLT-B. C98970
52060 IF CNT IS LESS THAN 1000 GO TO FLT-A. C98970
52070 DISPLAY : MORE THAN 1000 FREQUENCY OCCURENCES : UPON CONSOLE. C98970
52080 GO TO CF1. C98970
52090 FLT-D. C98970
52100 MOVE OBS-1 TO HIST-VALUE [CNT]. C98970
52110 IF CNT IS GREATER THAN KNT THEN MOVE CNT TO KNT. C98970
52120 FLT-C. C98970
52130 ADD 1 TO FREQ-HIST-VALUE [CNT]. C98970
52140 GO TO HEAD1. C98970
52200 CLOSE-FILES. C98970
52205 PERFORM SET-HISTOG THRU END-SH. C98970
52207 CF1. C98970
52210 CLOSE IN-FILE, HIST-FILE. C98970
52211 IF HIST-FLAG IS EQUAL TO 11: DISPLAY : HIST ERROR : UPON C98970
52212 CONSOLE. C98970
52215 DISPLAY : NO OF HISTOGRAMS > : NO-OF-HISTS UPON CONSOLE. C98970
52220 DISPLAY : EOL C9897P : UPON CONSOLE. C98970
52230 GOBACK. C98970
95000 COMPUTE-MEAN-VARIANCE. C98970
95005 IF HIST-NO-OF-OBS EQUAL TO 1 GO TO CMV-3. C98970
95010 MOVE ZERO TO CNT. C98970
95020 MOVE ZERO TO MEAN. C98970
95030 CMV-1. C98970
95040 ADD 1 TO CNT. C98970
95050 COMPUTE TEMP-COMP > HIST-VALUE [CNT] * FREQ-HIST-VALUE [CNT]. C98970
95060 ADD TEMP-COMP TO MEAN. C98970
95070 IF CNT IS LESS THAN KNT GO TO CMV-1. C98970
95080 DIVIDE HIST-NO-OF-OBS INTO MEAN. C98970
95090 MOVE ZERO TO CNT. C98970
95100 MOVE ZERO TO VARIANCE. C98970
95110 CMV-2. C98970
95120 ADD 1 TO CNT. C98970
95130 COMPUTE TEMP-COMP > [(HIST-VALUE [CNT] - MEAN) ** 2] * C98970
95140 FREQ-HIST-VALUE [CNT]. C98970
95150 ADD TEMP-COMP TO VARIANCE. C98970
95160 IF CNT IS LESS THAN KNT GO TO CMV-2. C98970
95170 COMPUTE VARIANCE > VARIANCE / [HIST-NO-OF-OBS - 1]. C98970
95180 MOVE MEAN TO MEAN-RPT. C98970
95190 MOVE VARIANCE TO VARIANCE-RPT. C98970
95191 GO TO CMV-4. C98970
95192 CMV-3. C98970
95193 MOVE ZERO TO VARIANCE-RPT. C98970
95194 MOVE HIST-VALUE [1] TO MEAN-RPT. C98970
95195 CMV-4. C98970
95290 END-CMV. C98970
97000 WRITE-HISTOGRAM. C98970
97355 PERFORM COMPUTE-MEAN-VARIANCE THRU END-CMV. C98970
97356 MOVE CUR-WUC TO TASK7-WUC. C98970
97357 MOVE CUR-HMC TO TASK7-HMC. C98970
97358 MOVE ISCHRONAL TO TASK7-ISO. C98970
97360 WRITE HIST-REC FROM TASK7-REC. C98970
99990 END-HIST. EXIT. C98970
/* PLACE CONUL SOURCE BEFORE THIS CARD
//CHG.TF6IN DD *.SPACE>[CYL,1,1] 1440 CDS
/* PLACE TFG DATA BEFORE THIS CARD
//TPR.TU12 DD DISP>[OLD,KEEP],VOL>SER>+F1,UNIT>T+F1 T12
//TPR.TU25 DD DISP>[OLD,KEEP],VOL>SER>+F8,UNIT>T+F8 T25
//TPR.TPRIN DD *.SPACE>[TRK,1,1]
T/P TU12 10100202020
T/P TU25 10100502050
/* PLACE T/P CONTROL CARDS BEFORE THIS CARD

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# 6.15.7 MERGE AND ADD WUC GROUP IDENTIFICATION

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//T9897A JOB 01: WANG :PTTY>02:TYPRUN>HOLD
//C9897A EXEC P9655L,TIME>03,ACCT>D35323007
//CHG,TU13 DU DISP>[PASS],UNIT>[T+F2,1,DEFER],DSN>+B,9897460, CT13 1
// VOL>SER>[+F2,A+F2,B+F2,C+F2,D+F2,E+F2,F+F2,G+F2,H+F2, CT13 2
// 1+F2,J+F2,K+F2,L+F2,M+F2,N+F2,O+F2,P+F2,Q+F2,R+F2,S+F2] T13 3
//CHG,TU14 DU DISP>[PASS],UNIT>[T+F3,1,DEFER],DSN>+C,9897431, CT14 1
// VOL>SER>[+F3,A+F3,B+F3,C+F3,D+F3,E+F3,F+F3,G+F3,H+F3, CT14 2
// 1+F3,J+F3,K+F3,L+F3,M+F3,N+F3,O+F3,P+F3,Q+F3,R+F3,S+F3] T14 3
//CHG,TU15 DD DISP>[PASS],UNIT>[T+F4,1,DEFER],DSN>+D,9897431, CT15 1
// VOL>SER>[+F4,A+F4,B+F4,C+F4,D+F4,E+F4,F+F4,G+F4,H+F4, CT15 2
// 1+F4,J+F4,K+F4,L+F4,M+F4,N+F4,O+F4,P+F4,Q+F4,R+F4,S+F4] T15 3
//CHG,TU22 DD DISP>[KEEP],UNIT>[T+F5,1,DEFER],DSN>+E,9897463, CT22 1
// VOL>SER>[+F5,A+F5,B+F5,C+F5,D+F5,E+F5,F+F5,G+F5,H+F5, CT22 2
// 1+F5,J+F5,K+F5,L+F5,M+F5,N+F5,O+F5,P+F5,Q+F5,R+F5,S+F5] T22 3
//CHG,INPUT DD +,SPACE>[CYL,[1,1]] 1440 CDS
00000 CUMULINE COMPILE 0. WANG. C98970
01000 IDENTIFICATION DIVISION. C98970
01010 PROGRAM=ID. C9897 C98970
01020 AUTHOR. A. J. ROWKER C98970
01030 INSTALLATION. GENERAL DYNAMICS/CONVAIR. C98970
01040 DATE-WRITTEN. 25 JUL 72. C98970
01050 REMARKS. PROGRAM V11 C98970
01060 ADD GROUP IDENTIFICATION C98970
01070 AND MERGE DATA. C98970
02000 ENVIRONMENT DIVISION. C98970
02010 CONFIGURATION SECTION. C98970
02020 SOURCE-COMPUTER. IBM-360. C98970
02030 OBJECT-COMPUTER. IBM-360. C98970
02100 INPUT-OUTPUT SECTION. C98970
02110 FILE-CONTROL. C98970
02120 SELECT IN=FILE-1 ASSIGN TO UT-S-TU13 C98970
02130 RESERVE 1 ALTERNATE AREA. C98970
02140 SELECT IN=FILE-2 ASSIGN TO UT-S-TU14 C98970
02150 RESERVE 1 ALTERNATE AREA. C98970
02160 SELECT IN=FILE-3 ASSIGN TO UT-S-TU15 C98970
02170 RESERVE 1 ALTERNATE AREA. C98970
02180 SELECT CARD=FILE ASSIGN TO DA-S-DT01 C98970
02190 RESERVE 1 ALTERNATE AREA. C98970
02200 SELECT OUTFILE ASSIGN TO UT-S-TU22 C98970
02210 RESERVE 1 ALTERNATE AREA. C98970
10000 DATA DIVISION. C98970
10010 FILE SECTION. C98970
11100 FD IN=FILE-1 C98970
11120 RECORDING MODE IS F C98970
11130 BLOCK CONTAINS 60 RECORDS C98970
11140 RECORD CONTAINS 50 CHARACTERS C98970
11150 LABEL RECORDS ARE OMITTED C98970
11160 DATA RECORDS ARE IN-REC-1. C98970
11170 01 IN=REC-1 PICTURE X(50), C98970
12100 FD IN=FILE-2 C98970
12120 RECORDING MODE IS F C98970
12130 BLOCK CONTAINS 60 RECORDS C98970
12140 RECORD CONTAINS 50 CHARACTERS C98970
12150 LABEL RECORDS ARE OMITTED C98970
12160 DATA RECORDS ARE IN-REC-2. C98970
12170 01 IN=REC-2 PICTURE X(50), C98970
13100 FD IN=FILE-3 C98970
13120 RECORDING MODE IS F C98970
13130 BLOCK CONTAINS 60 RECORDS C98970
13140 RECORD CONTAINS 50 CHARACTERS C98970
13150 LABEL RECORDS ARE OMITTED C98970
13160 DATA RECORDS ARE IN-REC-3. C98970
13170 01 IN=REC-3 PICTURE X(50), C98970
14100 FD CARD=FILE C98970
14120 RECORDING MODE IS F C98970
14130 BLOCK CONTAINS 20 RECORDS C98970
14140 RECORD CONTAINS 80 CHARACTERS C98970
14150 LABEL RECORDS ARE STANDARD C98970
14160 DATA RECORDS ARE CARD-REC. C98970
14170 01 CARD=REC PICTURE X(80), C98970
15100 FD OUTFILE C98970
15120 RECORDING MODE IS F C98970
15130 BLOCK CONTAINS 60 RECORDS C98970
15140 RECORD CONTAINS 50 CHARACTERS C98970
15150 LABEL RECORDS ARE OMITTED C98970
15160 DATA RECORDS ARE OUT-REC. C98970

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51000	READ-FILE-1.	C98970
51010	READ IN-FILE-1 INTO DATA-IN-REC. AT END GO TO READ-FILE-2.	C98970
51015	ADD 1 TO NUM-REC-1.	C98970
51020	PERFORM PROCESS-WUC THRU END-P-W.	C98970
51030	GO TO READ-FILE-1.	C98970
51100	READ-FILE-2.	C98970
51110	READ IN-FILL-2 INTO DATA-IN-REC. AT END GO TO READ-FILE-3.	C98970
51115	ADD 1 TO NUM-REC-2.	C98970
51120	PERFORM PROCESS-WUC THRU END-P-W.	C98970
51130	GO TO READ-FILE-2.	C98970
51200	READ-FILE-3.	C98970
51210	READ IN-FILL-3 INTO DATA-IN-REC. AT END GO TO CLOSE-FILES.	C98970
51215	ADD 1 TO NUM-REC-3.	C98970
51220	PERFORM PROCESS-WUC THRU END-P-W.	C98970
51230	GO TO READ-FILE-3.	C98970
52000	PROCESS-WUC.	C98970
52010	IF WUC-IN IS EQUAL TO LAST-WUC-IN GO TO WRITE-OUTREC.	C98970
52015	MOVE SPEC-WUC-TABLE (1) TO WUC-TEMP.	C98970
52020	IF WUC-IN-2 IS EQUAL TO WUC-TEMP-2.	C98970
52030	GO TO PROCESS-SPECIAL-WUC.	C98970
52040	MOVE ZERO TO INDEX-1.	C98970
52050	TEST-WUC.	C98970
52060	ADD 1 TO INDEX-1.	C98970
52065	MOVE WUC-TABLE-5 (INDEX-1) TO WUC-TEMP.	C98970
52070	IF WUC-IN-2 IS EQUAL TO WUC-TEMP-2.	C98970
52080	GO TO SAME-WUC-2.	C98970
52090	IF INDEX-1 IS LESS THAN MAX-NUM-WUC GO TO TEST-WUC.	C98970
52100	MOVE SPACE TO LAST-WUC-IN.	C98970
52110	GO TO END-P-W.	C98970
52200	SAME-WUC-2.	C98970
52205	MOVE WUC-TABLE-5 (INDEX-1) TO WUC-TEMP.	C98970
52210	IF WUC-TEMP-3DIF IS EQUAL TO SPACE	C98970
52220	GO TO WRITE-OUTREC-1.	C98970
52230	IF WUC-IN-3 IS EQUAL TO WUC-TEMP-3 GO TO	C98970
52240	WRITE-OUTREC-1.	C98970
52250	ADD 1 TO INDEX-1.	C98970
52260	IF INDEX-1 IS GREATER THAN MAX-NUM-WUC	C98970
52270	DISPLAY : PROBLEM IN SAME-WUC-2 I UPON CONSOLE	C98970
52280	GO TO CLOSE-FILES.	C98970
52290	GO TO SAME-WUC-2.	C98970
52400	WRITE-OUTREC.	C98970
52410	MOVE CUR-GRP-ID TO GROUP-ID.	C98970
52420	MOVE CUR-WUC TO GROUP-WUC.	C98970
52430	WRITE OUT-REC FROM DATA-IN-REC.	C98970
52440	ADD 1 TO NUM-OUT-REC.	C98970
52450	MOVE WUC-IN TO LAST-WUC-IN.	C98970
52460	GO TO END-P-W.	C98970
52500	PROCESS-SPECIAL-WUC.	C98970
52510	MOVE 1 TO INDEX-2.	C98970
52520	IF WUC-IN IS EQUAL SPEC-WUC-TABLE (INDEX-2) GO TO SPEC-WUC-1.	C98970
52600	PROCESS-SPEC-WUC-3.	C98970
52610	ADD 1 TO INDEX-2.	C98970
52615	MOVE SPEC-WUC-TABLE (INDEX-2) TO WUC-TEMP.	C98970
52620	IF WUC-IN-3 IS EQUAL TO WUC-TEMP-3	C98970
52630	GO TO SPEC-WUC-1.	C98970
52640	IF INDEX-2 IS LESS THAN MAX-SPEC-WUC GO TO	C98970
52650	PROCESS-SPEC-WUC-3.	C98970
52660	MOVE SPACE TO LAST-WUC-IN.	C98970
52670	GO TO END-P-W.	C98970
52700	SPEC-WUC-1.	C98970
52710	COMPUTE CUR-GRP-ID > INDEX-2 < MAX-NUM-WUC.	C98970
52720	MOVE SPEC-WUC-TABLE (INDEX-2) TO CUR-WUC.	C98970
52730	GO TO WRITE-OUTREC.	C98970
52800	WRITE-OUTREC-1.	C98970
52810	MOVE INDEX-1 TO CUR-GRP-ID.	C98970
52820	MOVE WUC-TABLE-5 (INDEX-1) TO CUR-WUC.	C98970
52830	GO TO WRITE-OUTREC.	C98970
52990	END-P-W, EXIT.	C98970
55000	CLOSE-FILES.	C98970
55010	MOVE NUM-REC-1 TO TEMP-NUM.	C98970
55020	DISPLAY : NO. RECS FILE 1 I TEMP-NUM UPON CONSOLE.	C98970
55030	MOVE NUM-REC-2 TO TEMP-NUM.	C98970
55040	DISPLAY : NO. RECS FILE 2 I TEMP-NUM UPON CONSOLE.	C98970
55050	MOVE NUM-REC-3 TO TEMP-NUM.	C98970
55060	DISPLAY : NO. RECS FILE 3 I TEMP-NUM UPON CONSOLE.	C98970
55070	MOVE NUM-OUT-REC TO TEMP-NUM.	C98970
55080	DISPLAY : NO. OUTRECS I TEMP-NUM UPON CONSOLE.	C98970
55100	COMPUTE INDEX-1 > NUM-OUT-REC - NUM-OUT-REC / 60 * 60.	C98970
55110	IF INDEX-1 IS EQUAL TO ZERO GO TO CF-1.	C98970



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55120 CF-2.
55130 WRITE OUT-REC FROM NINE.
55140 ADD 1 TO INDEX-1.
55150 IF INDEX-1 IS LESS THAN 60 GO TO CF-2.
55200 CF-1.
55210 CLOSE IN-FILE-1.
55220 IN-FILE-2.
55230 IN-FILE-3.
55240 CARD-FILE.
55250 OUTFILE WITH LOCK.
55260 DISPLAY : E0J C9897 : UPON CONSOLE.
55270 GOBACK.
/* PLACE COBOL SOURCE BEFORE THIS CARD
//CHG.TF6IN DD *.SPACEX(CYL,(1,1))
00000 GET TF6
010001 019999 REPLACE
TF6 D101 11 0202000
43
11J
11K
11
12H
12
13C
13J
13
14
23K
23H
23N
23U
23S
23
41F
41
42E
42F
42G
42
44
45E
45J
45
46A
46C
46G
46H
46J
46
47
49A
49
51
52
55
63
65
71
75
93
97
11
74000
74A
74B
74C
74D
74F
74H
74K
74L
74P
74Q
*END
/* PLACE TF6 DATA BEFORE THIS CARD
//TPR.TU13 DD DISPX(OLD,KEEP),VOL>SER>+P2,UNIT>T+P2
//TPR.TU14 DD DISPX(OLD,KEEP),VOL>SER>+P3,UNIT>T+P3
//TPR.TU15 DD DISPX(OLD,KEEP),VOL>SER>+P4,UNIT>T+P4
//TPR.TU22 DD DISPX(OLD,KEEP),VOL>SER>+P5,UNIT>T+P5
//TPR.TPRIN DD *.SPACEX(TRK,(1,1))
T/P TU13 10100502050
T/P TU14 101005J2050
T/P TU15 10100502050
T/P TU22 10100502050
T/P DT01 10100002000
/* PLACE T/P CONTROL CARDS BEFORE THIS CARD

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C98970  
C98970  
C98970  
C98970  
C98970  
C98970  
C98970  
C98970  
C98970  
C98970  
C98970

1000 CDS  
C98970'T  
'T

T13  
T14  
T15  
T22

## 6.15.8 SORT MANHOUR AND NORM DATA

```
//C98975 EXEC P96<2N,W>199,TIME>02,ACCT>035323007
//CHG,SORTIN DU DISP>[KEEP],UNIT>[T+F5,1,DEFER], CT22 1
// DSN>+E,9897463, CT22 2
// VOL>SER>[+F5,A+F5,B+F5,C+F5,D+F5,E+F5,F+F5,G+F5,H+F5, CT22 3
// 1+F5,J+F5,K+F5,L+F5,M+F5,N+F5,O+F5,P+F5,Q+F5,R+F5,S+F5],CT22 4
// DCH>[LRECL>0050,BLKSIZE>3000],LABEL>[C,NSL,RETPD>099]
//CHG,SORTOUT DD DISP>[KEEP],UNIT>[T+F1,1,DEFER],DSN>+A,9897464, CT12 1
// VOL>SER>[+F1,A+F1,B+F1,C+F1,D+F1,E+F1,F+F1,G+F1,H+F1, CT12 2
// 1+F1,J+F1,K+F1,L+F1,M+F1,N+F1,O+F1,P+F1,Q+F1,R+F1,S+F1],CT12 3
// DCH>[LRECL>0050,BLKSIZE>3000]
//CHG,SYSIN DD *,DCB>BLKSIZE>0080,SPACE>[TRK,[1,1]]
SORT FIELDS>[001,001,CH,A,002,002,CH,A,013,003,CH,A,019,003,CH,D, C
011,001,CH,A,3,SIZE>E0050000
MODES E15>[E15,008,SORTLIB,N],E18>[E18,024,SORTLIB,N]
```

## 6.15.9 MEANS OF WUC SET

```
//T9897H JOB 01: WANG 1,PRTY>02,TYPRUN>HOLD
//C9897H EXEC P96<5L,TIME>05,ACCT>035323007
//CHG,TU12 DD DISP>[PASS],UNIT>[T+F1,1,DEFER],DSN>+A,9897464, CT12 1
// VOL>SER>[+F1,A+F1,B+F1,C+F1,D+F1,E+F1,F+F1,G+F1,H+F1, CT12 2
// 1+F1,J+F1,K+F1,L+F1,M+F1,N+F1,O+F1,P+F1,Q+F1,R+F1,S+F1] T12 3
//CHG,TU23 DD DSN>+P,9897465,SPACE>[CYL,[009,001]] D23-OUT
//CHG,TU24 DD DSN>+P,9897466,SPACE>[CYL,[009,001]] D24-OUT
//CHG,INPUT DD *,SPACE>[CYL,[1,1]] 1440 CDS
00000 COMLINE COMPILE 0. WANG C98970
01000 IDENTIFICATION DIVISION. C98970
01010 PROGRAM-ID. C9897 C98970
01020 AUTHOR. A. J. BOWKER. C98970
01030 INSTALLATION. GENERAL DYNAMICS/CONVAIR. C98970
01040 DATE-WRITTEN. 27 JUL 72. C98970
01050 REMARKS. C98970
01060 TASK V11-5 C98970
01070 COMPUTE PASS NO 1. C98970
02000 ENVIRONMENT DIVISION. C98970
02010 CONFIGURATION SECTION. C98970
02020 SOURCE-COMPUTER. IBM-360. C98970
02030 OBJECT-COMPUTER. IBM-360. C98970
02100 INPUT-OUTPUT SECTION. C98970
02110 FILE-CONTROL. C98970
02120 SELECT IN-FILE-1 ASSIGN TO UT-S-TU12 C98970
02130 RESERVE 1 ALTERNATE AREA. C98970
02140 SELECT FILE-2 ASSIGN TO UT-S-TU23 C98970
02150 RESERVE 1 ALTERNATE AREA. C98970
02160 SELECT FILE-3 ASSIGN TO UT-S-TU24 C98970
02170 RESERVE 1 ALTERNATE AREA. C98970
10000 DATA DIVISION. C98970
10010 FILE SECTION. C98970
11100 FD IN-FILE-1 C98970
11110 C98970
11120 RECORDING MODE IS F C98970
11130 BLOCK CONTAINS 60 RECORDS C98970
11140 RECORD CONTAINS 50 CHARACTERS C98970
11150 LABEL RECORDS ARE OMITTED C98970
11160 DATA RECORDS ARE IN-REC-1. C98970
11170 01 IN-REC-1 SYNC. C98970
11180 05 IS0 PICTURE X. C98970
11184 05 GRP-ID PICTURE XX. C98970
11186 05 FILLER PICTURE X(7). C98970
11190 05 JU PICTURE X. C98970
11200 05 FILLER PICTURE X. C98970
11210 05 WUC PICTURE X(8). C98970
11220 05 FILLER PICTURE X. C98970
11230 05 DATA-IN. C98970
11240 10 FILLER PICTURE X(4). C98970
11250 10 NORM-MA PICTURE 9(7)V9. C98970
11260 10 FILLER PICTURE X. C98970
11270 10 VAR-NORM-MA PICTURE 9(7)V9. C98970
11280 10 FILLER PICTURE X(9). C98970
11290 05 FILLER PICTURE XX. C98970
12100 FD FILE-2 C98970
12110 C98970
12120 RECORDING MODE IS F C98970
12130 BLOCK CONTAINS 60 RECORDS C98970
12140 RECORD CONTAINS 50 CHARACTERS C98970
```

[illegible]

50200	TEST-GRP-ID.	C98970
50210	IF GRP-ID IS EQUAL TO CURID GO TO TEST-WUC.	C98970
50220	IF CURID IS EQUAL TO SPACE	C98970
50230	MOVE GRP-ID TO CURID	C98970
50240	GO TO TEST-WUC.	C98970
50250	GO TO NEW-GROUP.	C98970
50300	TEST-WUC.	C98970
50310	IF WUC IS EQUAL TO CURWUC GO TO TEST-ID.	C98970
50320	IF CURWUC IS EQUAL TO SPACE	C98970
50330	MOVE WUC TO CURWUC	C98970
50340	GO TO TEST-ID.	C98970
50350	GO TO NEW-WUC.	C98970
50400	TEST-ID.	C98970
50410	IF JD IS EQUAL TO ONE MOVE DATA-IN TO DATA-1	C98970
50420	GO TO READ-DATA-IN.	C98970
50430	IF JD IS EQUAL TO TWO MOVE DATA-IN TO DATA-2	C98970
50440	GO TO TEST-HMC.	C98970
50450	IF JD IS EQUAL TO THREE	C98970
50460	COMPUTE NORM-UMA-NUM > NORM-UMA-NUM < N2 * NORM-MA	C98970
50470	GO TO READ-DATA-IN.	C98970
50480	DISPLAY , BAD ID 1 JD UPON CONSOLE	C98970
50490	GO TO CLOSE-FILES.	C98970
50500	TEST-HMC.	C98970
50510	IF HMC-1 IS NOT EQUAL TO HMC-2 GO TO READ-DATA-IN.	C98970
50520	COMPUTE MH-MA-NUMA > MH-MA-NUMA < MH-MA * NUMA.	C98970
50530	ADD NUMA TO N1.	C98970
50540	ADD NUMA TO N2.	C98970
50550	COMPUTE C > C < MH-MA * NUMA.	C98970
50560	COMPUTE MH-REP-PE-N > MH-REP-PE-N < MH-MA * NREP-PE.	C98970
50570	COMPUTE MH-REP-HP-N > MH-REP-HP-N < MH-MA * NREP-HP.	C98970
50580	ADD NREP-PE TO NREP-PE-D.	C98970
50590	ADD NREP-HP TO NREP-HP-D.	C98970
50600		C98970
50610	GO TO READ-DATA-IN.	C98970
51000	NEW-WUC.	C98970
51010	MOVE CURISO TO ISO-2.	C98970
51020	MOVE CURID TO GRP-ID-2.	C98970
51025	MOVE CURWUC TO WUC-REC-2.	C98970
51030	WRITE REC-2 FROM WS-REC-2.	C98970
51040	ADD 1 TO NUM-REC-2.	C98970
51050	PERFORM RESET-1.	C98970
51060	MOVE WUC TO CURWUC.	C98970
51090	GO TO TEST-ID.	C98970
51100	NEW-GROUP.	C98970
51110	IF N1 IS EQUAL TO ZERO DISPLAY 1 N1 IS ZERO ; CURWUC CURID	C98970
51120	UPON CONSOLE GO TO CLOSE-FILES.	C98970
51130	COMPUTE MH-UMA > MH-MA-NUMA / N1.	C98970
51140	COMPUTE NORM-UMA > NORM-UMA-NUM / N1.	C98970
51150	IF NREP-PE-D IS EQUAL TO ZERO MOVE ZERO TO MH-REP-PE	C98970
51160	GO TO NG-1.	C98970
51170	COMPUTE MH-REP-PE > MH-REP-PE-N / NREP-PE-D.	C98970
51175	NG-1.	C98970
51180	IF NREP-HP-D IS EQUAL TO ZERO MOVE ZERO TO MH-REP-HP	C98970
51190	GO TO NG-2.	C98970
51200	COMPUTE MH-REP-HP > MH-REP-HP-N / NREP-HP-D.	C98970
51215	NG-2.	C98970
51210	MOVE CURISO TO ISO-3.	C98970
51220	MOVE CURID TO GRP-ID-3.	C98970
51230	WRITE REC-3 FROM WS-REC-3.	C98970
51240	ADD 1 TO NUM-REC-3.	C98970
51250	PERFORM RESET-2.	C98970
51260	MOVE CURISO TO ISO-2.	C98970
51270	MOVE CURID TO GRP-ID-2.	C98970
51275	MOVE CURWUC TO WUC-REC-2.	C98970
51280	WRITE REC-2 FROM WS-REC-2.	C98970
51285	PERFORM RESET-1.	C98970
51290	ADD 1 TO NUM-REC-2.	C98970
51360	NEW-GROUP-END. EXIT.	C98970
51365	NEW-GROUP-CONTINUE.	C98970
51370	MOVE WUC TO CURWUC. MOVE GRP-ID TO CURID.	C98970
51380	MOVE ISO TO CURISO.	C98970
51390	GO TO TEST-ID.	C98970
52000	CLOSE-DATA.	C98970
52010	PERFORM NEW-GROUP THRU NEW-GROUP-END.	C98970
52100	MOVE NUM-REC-1 TO TEMP-NUM.	C98970
52110	DISPLAY : NO. RECS FILE 1 TEMP-NUM UPON CONSOLE.	C98970
52120	MOVE NUM-REC-2 TO TEMP-NUM.	C98970
52130	DISPLAY : NO. RECS FILE 2 TEMP-NUM UPON CONSOLE.	C98970
52140	MOVE NUM-REC-3 TO TEMP-NUM.	C98970
52150	DISPLAY : NO. RECS FILE 3 TEMP-NUM UPON CONSOLE.	C98970
52200	CLOSE-FILES.	C98970
52210	PERFORM NINE-FILL THRU END-NF.	C98970
52220	CLOSE IN-FILE-1.	C98970
52230	FILE-2.	C98970
52240	FILE-3 WITH LOCK.	C98970
52250	DISPLAY 1 EOL 9897 1 UPON CONSOLE.	C98970
52290	GOBACK.	C98970

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53000 RESET-1. C98970
53010 MOVE ZERO TO N2. C98970
53020 MOVE ZERO TO C. C98970
53100 RESET-2. C98970
53110 MOVE ZERO TO N1. C98970
53120 MOVE ZERO TO NORM-UMA-NUM. C98970
53130 MOVE ZERO TO MH-MA-NUMA. C98970
53140 MOVE ZERO TO MH-REP-PE-N. C98970
53150 MOVE ZERO TO MH-REP-HP-N. C98970
53160 MOVE ZERO TO NREP-PE-D. C98970
53170 MOVE ZERO TO NREP-HP-D. C98970
53200 NINE-FILL. C98970
53300 NF=2. C98970
53310 COMPUTE CNT > NUM-REC-2 - NUM-REC-2 / BF * BF. C98970
53320 IF CNT IS EQUAL TO ZERO GO TO NF-3. C98970
53330 NF=4. C98970
53340 WRITE REC-2 FROM NINE. C98970
53350 ADD 1 TO CNT. C98970
53360 IF CNT IS LESS THAN BF GO TO NF-4. C98970
53400 NF=3. C98970
53410 COMPUTE CNT > NUM-REC-3 - NUM-REC-3 / BF * BF. C98970
53420 IF CNT IS EQUAL TO ZERO GO TO END-NF. C98970
53430 NF=5. C98970
53440 WRITE REC-3 FROM NINE. C98970
53450 ADD 1 TO CNT. C98970
53460 IF CNT IS LESS THAN BF GO TO NF-5. C98970
53490 END-NF. EXII. C98970
/* PLACE CONTROL SOURCE BEFORE THIS CARD
//CHG.TF6IN DU *.SPACE>[CYL,[1,1]] 1440 CDS
/* PLACE TFG DATA BEFORE THIS CARD
//TPR.TU12 DU DISP>[OLD,KEEP],VOL>SER>+F1,UNIT>T+F1 T12
//TPR.TU23 DU DISP>[OLD,PASS]
//TPR.TU24 DU DISP>[OLD,PASS]
//TPR.TPRIN DU *.SPACE>[TKK,[1,1]]
T/P TU12 10100502050
T/P TU23 10100502050
T/P TU24 10100502050
/* PLACE T/P CONTROL CARDS BEFORE THIS CARD

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#### 6.15.10 VARIANCE OF WUC SET

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//C98976 EXEC P965SL,TIME>05,ACCT>035323007
//CHG.TU12 DU DISP>[PASS],UNIT>[T+F1,1,DEFER],DSN>+A.9897464, CT12 1
// VOL>SER>[+F1,A+F1,B+F1,C+F1,D+F1,E+F1,F+F1,G+F1,H+F1, CT12 2
// I+F1,J+F1,K+F1,L+F1,M+F1,N+F1,O+F1,P+F1,Q+F1,R+F1,S+F1] T12 3
//CHG.TU23 DU USN>+P.9897465,DISP>[OLD,PASS] 023-IN
//CHG.TU24 DU DSN>+P.9897466,DISP>[OLD,PASS] 024-IN
//CHG.TU25 DU DSN>+P.9897467,SPACE>[CYL,[009,001]] 025-OUT
//CHG.INPUT DU *.SPACE>[CYL,[1,1]] 1440 CDS
00000 COMBINE COMPILE 0. WANG C98970
01000 IDENTIFICATION DIVISION. C98970
01010 PROGRAM-ID. C9897
C98970
01020 AUTHOR. A. J. BOWKER. C98970
01030 INSTALLATION. GENERAL DYNAMICS/CONVAIR. C98970
01040 DATE-WRITTEN. 27 JUL 72. C98970
01050 REMARKS. C98970
01060 TASK VII-6 C98970
01070 COMPUTE PASS NO 2. C98970
02000 ENVIRONMENT DIVISION. C98970
02010 CONFIGURATION SECTION. C98970
02020 SOURCE-COMPUTER. IBM-360. C98970
02030 OBJECT-COMPUTER. IBM-360. C98970
02100 INPUT-OUTPUT SECTION. C98970
02110 FILE-CONTROL. C98970
02120 SELECT IN-FILE-1 ASSIGN TO UT-S-TU12 C98970
02130 RESERVE 1 ALTERNATE AREA. C98970
02140 SELECT FILE-2 ASSIGN TO UT-S-TU23 C98970
02150 RESERVE 1 ALTERNATE AREA. C98970
02160 SELECT FILE-3 ASSIGN TO UT-S-TU24 C98970
02170 RESERVE 1 ALTERNATE AREA. C98970
02180 SELECT OUT-DATA-FILE ASSIGN TO UT-S-TU25 C98970
02190 RESERVE 1 ALTERNATE AREA. C98970
10000 DATA DIVISION. C98970
10010 FILE SECTION. C98970
11100 FD IN-FILE-1 C98970

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11110				C98970
11120	RECORDING MODE IS F			C98970
11130	BLOCK CONTAINS 60 RECORDS			C98970
11140	RECORD CONTAINS 50	CHARACTERS		C98970
11150	LABEL RECORDS ARE OMITTED			C98970
11160	DATA RECORDS ARE IN-REC-1.			C98970
11170	01 IN-REC-1 SYNC.			C98970
11180	05 ISU	PICTURE X.		C98970
11184	05 GRP-ID	PICTURE XX.		C98970
11185	05 FILLER	PICTURE X.		C98970
11186	05 WUC-IN	PICTURE X(5).		C98970
11187	05 FILLER	PICTURE X.		C98970
11190	05 JU	PICTURE X.		C98970
11200	05 FILLER	PICTURE X.		C98970
11210	05 WUC	PICTURE X(5).		C98970
11220	05 FILLER	PICTURE X.		C98970
11230	05 DATA-IN.			C98970
11240	10 FILLER	PICTURE X(4).		C98970
11250	10 NORM-MA	PICTURE 9(7)V9.		C98970
11260	10 FILLER	PICTURE X.		C98970
11270	10 VAR-NORM-MA	PICTURE 9(7)V9.		C98970
11280	10 FILLER	PICTURE X(9).		C98970
11290	05 FILLER	PICTURE XX.		C98970
12100	FD FILL-2			C98970
12110				C98970
12120	RECORDING MODE IS F			C98970
12130	BLOCK CONTAINS 60 RECORDS			C98970
12140	RECORD CONTAINS 50	CHARACTERS		C98970
12150	LABEL RECORDS ARE OMITTED			C98970
12160	DATA RECORDS ARE REC-2.			C98970
12170	01 REC-2 SYNC	PICTURE X(50).		C98970
13100	FD FILL-3			C98970
13110				C98970
13120	RECORDING MODE IS F			C98970
13130	BLOCK CONTAINS 60 RECORDS			C98970
13140	RECORD CONTAINS 50	CHARACTERS		C98970
13150	LABEL RECORDS ARE OMITTED			C98970
13160	DATA RECORDS ARE REC-3.			C98970
13170	01 REC-3 SYNC	PICTURE X(50).		C98970
14000	FD OUT-DATA-FILE			C98970
14010	RECORDING MODE IS F			C98970
14020	BLOCK CONTAINS 20 RECORDS			C98970
14030	RECORD CONTAINS 100	CHARACTERS		C98970
14040	LABEL RECORDS ARE OMITTED			C98970
14050	DATA RECORDS ARE OUT-DATA-REC.			C98970
14060	01 OUT-DATA-REC SYNC	PICTURE X(100).		C98970
30000	WORKING-STORAGE SECTION.			C98970
30010	77 NORM-UMA-NUM COMPUTATIONAL	PICTURE S9(8)V9.		C98970
30020	77 MH-REP-PE-N COMPUTATIONAL	PICTURE S9(8)V9.		C98970
30030	77 MH-REP-PE-N COMPUTATIONAL	PICTURE S9(8)V9.		C98970
30040	77 NREP-PE-D COMPUTATIONAL	PICTURE S9(8)V9.		C98970
30050	77 NREP-HP-D COMPUTATIONAL	PICTURE S9(8)V9.		C98970
30060	77 NUM-REC-1 COMPUTATIONAL	PICTURE S9(8) VALUE ZERO.		C98970
30070	77 NUM-REC-2 COMPUTATIONAL	PICTURE S9(8) VALUE ZERO.		C98970
30080	77 NUM-REC-3 COMPUTATIONAL	PICTURE S9(8) VALUE ZERO.		C98970
30090	77 CNT COMPUTATIONAL	PICTURE S9(8).		C98970
30100	77 MH-MA-NUM COMPUTATIONAL	PICTURE S9(8)V9.		C98970
30110	77 BF COMPUTATIONAL	PICTURE S999 VALUE <60.		C98970
30120	77 CURISO	PICTURE X VALUE SPACE.		C98970
30130	77 CURID	PICTURE XX VALUE SPACE.		C98970
30140	77 CURWUC	PICTURE X(5) VALUE SPACE.		C98970
30150	77 ONE	PICTURE X VALUE 111.		C98970
30160	77 TWO	PICTURE X VALUE 121.		C98970
30170	77 THREE	PICTURE X VALUE 131.		C98970
30180	77 TEMP-NUM	PICTURE 9(8).		C98970
30200	01 DATA-1 SYNC.			C98970
30210	05 HMC-1	PICTURE XXX.		C98970
30220	05 FILLER	PICTURE X.		C98970
30230	05 NUMA	PICTURE 9(7)V9.		C98970
30240	05 FILLER	PICTURE X.		C98970
30250	05 NMLP-HP	PICTURE 9(7)V9.		C98970
30260	05 FILLER	PICTURE X.		C98970
30270	05 NMLP-PE	PICTURE 9(7)V9.		C98970
30300	01 DATA-2 SYNC.			C98970
30310	05 HMC-2	PICTURE XXX.		C98970
30320	05 FILLER	PICTURE X.		C98970
30330	05 MH-MA	PICTURE 9(7)V9.		C98970
30340	05 FILLER	PICTURE X.		C98970
30350	05 VAR-MH-MA	PICTURE 9(7)V9.		C98970
30360	05 FILLER	PICTURE X(9).		C98970
32170	01 WS-REC-1			C98970
32180	05 FILLER	PICTURE X.		C98970

32190	05	GRP-ID-2	PICTURE XX.	C98970
32200	05	FILLER	PICTURE X(9) VALUE SPACE.	C98970
32210	05	WUC-REC-2	PICTURE X(5).	C98970
32220	05	FILLER	PICTURE X(5) VALUE SPACE.	C98970
32230	05	N2	PICTURE 9(7)J9.	C98970
32240	05	FILLER	PICTURE X VALUE SPACE.	C98970
32250	05	C	PICTURE 9(7)J9.	C98970
32260	05	FILLER	PICTURE X(11) VALUE	C98970
32270				C98970
33170	01	WS-REC-3		C98970
33180	05	ISO-3	PICTURE X.	C98970
33190	05	GRP-ID-3	PICTURE XX.	C98970
33200	05	FILLER	PICTURE X VALUE SPACE.	C98970
33210	05	MH-UMA	PICTURE 9(7)J9.	C98970
33220	05	FILLER	PICTURE X VALUE SPACE.	C98970
33230	05	N1	PICTURE 9(7)J9.	C98970
33240	05	FILLER	PICTURE X VALUE SPACE.	C98970
33250	05	NORM-UMA	PICTURE 9(7)J9.	C98970
33260	05	FILLER	PICTURE X VALUE SPACE.	C98970
33270	05	MH-MCP-PE	PICTURE 9(7)J9.	C98970
33280	05	FILLER	PICTURE X VALUE SPACE.	C98970
33290	05	MH-MEP-HP	PICTURE 9(7)J9.	C98970
33300	05	FILLER	PICTURE XX VALUE 1 #1.	C98970
33400	01	PAGE-NUM COMPUTATIONAL	PICTURE 599 VALUE ZERO.	C98970
33410	01	LINES-PRINT COMPUTATIONAL	PICTURE 59(4) VALUE ZERO.	C98970
33420	01	X1 COMPUTATIONAL	PICTURE 59(8)J9.	C98970
33430	01	VAR-MH-UMA-D COMPUTATIONAL	PICTURE 59(8)J9.	C98970
33440	01	VAR-MH-UMA COMPUTATIONAL	PICTURE 59(8)J9.	C98970
33450	01	PAGE-CNT COMPUTATIONAL	PICTURE 5999 VALUE <100.	C98970
33460	01	A COMPUTATIONAL	PICTURE 59(8)J9.	C98970
33470	01	B COMPUTATIONAL	PICTURE 59(8)J9.	C98970
33480	01	VAR-NORM-UMA-D COMPUTATIONAL	PICTURE 59(8)J9.	C98970
33500	01	VAR-NORM-UMA COMPUTATIONAL	PICTURE 59(8)J9.	C98970
40000	01	NEW-PAGE-REC SYNC.		C98970
40010	05	FILLER	PICTURE X(50) VALUE	C98970
40020		#1	RESULTS OF PROCESSING MAIN1.	C98970
40030	05	FILLER	PICTURE X(40) VALUE	C98970
40040		TENANCE MANHOUR AND NORM DATA	PAGE 1.	C98970
40050	05	PAGE-NO-RPT	PICTURE 29.	C98970
40060	05	FILLER	PICTURE X(8) VALUE	C98970
40070		I	#1.	C98970
40100	01	TITLE-1 SYNC.		C98970
40110	05	FILLER	PICTURE X(50) VALUE	C98970
40120		10 WUC AIRCRAFT	MEAN VARIANCE	1.
40130	05	FILLER	PICTURE X(50) VALUE	C98970
40140		MEAN VARIANCE	MEAN MEAN	#1.
40200	01	TITLE-2 SYNC.		C98970
40210	05	FILLER	PICTURE X(50) VALUE	C98970
40220		GROUP SUBSET	MH/UMA MH/UMA	N1.
40230	05	FILLER	PICTURE X(50) VALUE	C98970
40240		NORM/UMA NORM/UMA	(MH/REP)PE (MH/REP)MPO	#1.
40300	01	DATA-OUT SYNC.		C98970
40310	05	FILLER	PICTURE XX VALUE SPACE.	C98970
40320	05	WUC-OUT	PICTURE X(5).	C98970
40330	05	FILLER	PICTURE XXX VALUE SPACE.	C98970
40340	05	A-C-SUB-SET	PICTURE X(7).	C98970
40350	05	FILLER	PICTURE X(3) VALUE SPACE.	C98970
40360	05	MH-UMA-RPT	PICTURE 2(8).9.	C98970
40370	05	FILLER	PICTURE X(3) VALUE SPACE.	C98970
40380	05	VAR-MH-UMA-RPT	PICTURE 2(8).9.	C98970
40390	05	FILLER	PICTURE X(3) VALUE SPACE.	C98970
40400	05	NORM-UMA-RPT	PICTURE 2(8).9.	C98970
40410	05	FILLER	PICTURE X(3) VALUE SPACE.	C98970
40420	05	VAR-NORM-UMA-RPT	PICTURE 2(8).9.	C98970
40430	05	FILLER	PICTURE X(3) VALUE SPACE.	C98970
40440	05	MH-MEP-PE-RPT	PICTURE 2(8).9.	C98970
40450	05	FILLER	PICTURE X(3) VALUE SPACE.	C98970
40460	05	MH-MEP-HP-RPT	PICTURE 2(8).9.	C98970
40470	05	FILLER	PICTURE X(5) VALUE	C98970
40480		I	#1.	C98970
50000		PROCEDURE DIVISION.		C98970
50010		OPEN INPUT IN-FILE-1.		C98970
50020		FILE-2.		C98970
50030		FILE-3, OUTPUT OUT-DATA-FILE.		C98970
50050		PERFORM RESET-1.		C98970
50060		PERFORM RESET-2.		C98970
50100		READ-DATA-IN.		C98970
50110		READ IN-FILE-1, AT END GO TO CLOSE-DATA.		C98970
50111		IF ISO IS EQUAL TO 191 GO TO CLOSE-DATA.		C98970
50116		ADD 1 TO NUM-REC-1.		C98970
50120		IF ISO IS EQUAL TO CURISO GO TO TEST-GRP-ID.		C98970
50130		IF CUMISO IS EQUAL TO SPACE		C98970
50140		MOVE ISO TO CURISO		C98970
50150		GO TO TEST-GRP-ID.		C98970

50160	GO TO NEW-GROUP.	C98970
50200	TEST-GRP-ID.	C98970
50210	IF GRP-ID IS EQUAL TO CURID GO TO TEST-WUC.	C98970
50220	IF CURID IS EQUAL TO SPACE	C98970
50230	MOVE GRP-ID TO CURID	C98970
50240	GO TO TEST-WUC.	C98970
50250	GO TO NEW-GROUP.	C98970
50300	TEST-WUC.	C98970
50310	IF WUC IS EQUAL TO CURWUC GO TO TEST-ID.	C98970
50320	IF CURWUC IS EQUAL TO SPACE	C98970
50330	MOVE WUC TO CURWUC	C98970
50340	GO TO TEST-ID.	C98970
50350	GO TO NEW-WUC.	C98970
50400	TEST-ID.	C98970
50405	MOVE WUC-IN TO WUC-OUT.	C98970
50410	IF JD IS EQUAL TO ONE MOVE DATA-IN TO DATA-1	C98970
50420	GO TO READ-DATA-IN.	C98970
50430	IF JD IS EQUAL TO TWO MOVE DATA-IN TO DATA-2	C98970
50440	GO TO TEST-HMC.	C98970
50450	IF N2 IS EQUAL TO ZERO GO TO READ-DATA-IN.	C98970
50455	COMPUTE $A > C / N2 - MH-UMA.$	C98970
50460	COMPUTE $VAR-MH-UMA-D > VAR-MH-UMA-D < [N2 * A * A < X1].$	C98970
50465	COMPUTE $VAR-NORM-UMA-D > VAR-NORM-UMA-D <$	C98970
50466	$N2 * [VAR-NORM-MA < [NORM-MA - NORM-UMA] *$	C98970
50467	$[NORM-MA - NORM-UMA]].$	C98970
50470	GO TO READ-DATA-IN.	C98970
50500	TEST-HMC.	C98970
50510	IF HMC-1 IS NOT EQUAL TO HMC-2 GO TO READ-DATA-IN.	C98970
50515	IF N2 IS EQUAL TO ZERO GO TO READ-DATA-IN.	C98970
50520	COMPUTE $R > MH-MA - C / N2.$	C98970
50530	COMPUTE $X1 > X1 < NUMA * [VAR-MH-MA < B * B].$	C98970
50690	GO TO READ-DATA-IN.	C98970
51000	NEW-WUC.	C98970
51050	PERFORM RESET-1.	C98970
51060	MOVE WUC TO CURWUC.	C98970
51090	GO TO TEST-ID.	C98970
51100	NEW-GROUP.	C98970
51110	COMPUTE $VAR-MH-UMA > VAR-MH-UMA-D / N1.$	C98970
51120	COMPUTE $VAR-NORM-UMA > VAR-NORM-UMA-D / N1.$	C98970
51140	IF CURISO IS EQUAL TO ONE MOVE I ISO 1 TO A-C-SUB-SET	C98970
51150	ELSE MOVE :NON-ISO1 TO A-C-SUB-SET.	C98970
51160	MOVE MH-UMA TO MH-UMA-RPT.	C98970
51170	MOVE VAR-MH-UMA TO VAR-MH-UMA-RPT.	C98970
51180	MOVE NORM-UMA TO NORM-UMA-RPT.	C98970
51190	MOVE VAR-NORM-UMA TO VAR-NORM-UMA-RPT.	C98970
51200	MOVE MH-REP-PE TO MH-REP-PE-RPT.	C98970
51210	MOVE MH-REP-HP TO MH-REP-HP-RPT.	C98970
51220	IF PAGE-CNT IS GREATER THAN 60 PERFORM NEW-PAGE.	C98970
51230	WRITE OUT-DATA-REC FROM DATA-OUT.	C98970
51240	ADD 1 TO PAGE-CNT.	C98970
51250	ADD 1 TO LINES-PRINT.	C98970
51255	NEW-GROUP-END.	C98970
51260	PERFORM RESET-1.	C98970
51270	PERFORM RESET-2.	C98970
51370	MOVE WUC TO CURWUC. MOVE GRP-ID TO CURID.	C98970
51380	MOVE ISO TO CURISO.	C98970
51390	GO TO TEST-ID.	C98970
52000	CLOSE-DATA.	C98970
52010	PERFORM NEW-GROUP.	C98970
52100	MOVE NUM-REC-1 TO TEMP-NUM.	C98970
52110	DISPLAY : NO. RECS FILE 1 TEMP-NUM UPON CONSOLE.	C98970
52120	MOVE NUM-REC-2 TO TEMP-NUM.	C98970
52130	DISPLAY : NO. RECS FILE 2 TEMP-NUM UPON CONSOLE.	C98970
52140	MOVE NUM-REC-3 TO TEMP-NUM.	C98970
52150	DISPLAY : NO. RECS FILE 3 TEMP-NUM UPON CONSOLE.	C98970
52160	MOVE LINES-PRINT TO TEMP-NUM.	C98970
52170	DISPLAY : TOTAL LINES PRINTED > TEMP-NUM UPON CONSOLE.	C98970
52180	MOVE PAGE-NUM TO TEMP-NUM.	C98970
52190	DISPLAY : TOTAL PAGES PRINTED > TEMP-NUM UPON CONSOLE.	C98970
52200	CLOSE-FILES.	C98970
52220	CLOSE IN-FILE-1.	C98970
52230	FILE-2.	C98970
52235	OUT-DATA-FILE.	C98970
52240	FILE-3 WITH LOCK.	C98970
52250	DISPLAY : EOL 9897 UPON CONSOLE.	C98970
52290	GOBACK.	C98970
53000	RESET-1.	C98970
53010	MOVE ZERO TO X1.	C98970
53020	READ FILE-2 INTO WS-REC-2. AT END GO TO CLOSE-DATA.	C98970
53040	IF ISO-2 IS EQUAL TO 191 GO TO CLOSE-DATA.	C98970
53050	ADD 1 TO NUM-REC-2.	C98970



53100	RESET-2.	
53110	MOVE ZERU TO VAR-MH-UMA-D.	C98970
53120	MOVE ZERU TO VAR-NORM-UMA-D.	C98970
53130	READ FILE-3 INTO WS-REC-3, AT END GO TO CLOSE-DATA.	C98970
53150	IF ISO-3 IS EQUAL TO 191 GO TO CLOSE-DATA.	C98970
53160	ADD 1 TO NUM-REC-3.	C98970
55000	NEW-PAGE.	C98970
55010	ADD 1 TO PAGE-NUM.	C98970
55020	MOVE ZERU TO PAGE-CNT.	C98970
55030	MOVE PAGE-NUM TO PAGE-NO-RPT.	C98970
55040	ADD 3 TO LINES-PRINT.	C98970
55050	WRITE OUT-DATA-REC FROM NEW-PAGE-REC.	C98970
55060	WRITE OUT-DATA-REC FROM TITLE-1.	C98970
55070	WRITE OUT-DATA-REC FROM TITLE-2.	C98970
/*	PLACE COBOL SOURCE BEFORE THIS CARD	
//CHG.TFGIN	DD *.SPACE>[CYL,[1,1]]	1440 CDS
/*	PLACE TFG DATA BEFORE THIS CARD	
//TPR.TU12	DD DISP>[OLD,KEEP],VOL>SER>+F1,UNIT>T+F1	T12
//TPR.TU25	DD DISP>[OLD,PASS]	025-PASS
//TPR.TPRIN	DD *.SPACE>[TRK,[1,1]]	
T/P TU25	1998100R000	
/*	PLACE T/P CONTROL CARDS BEFORE THIS CARD	
//C9897P EXEC	C96U3N,TIME>02,ACCT>035323007	
//CHG.TU25	DD DSN>+P.9897467,DISP>[OLD,DELETE]	025-IN
//CHG.TPRIN	DD *.SPACE>[TRK,[1,1]]	
T/P TU25	1998100R000	
/*	PLACE T/P CONTROL CARDS BEFORE THIS CARD	

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